ORAL ARGUMENT NOT YET SCHEDULED

No. 24-1135 (consolidated with Nos. 24-1228, 24-1246, 24-1249, 24-1250, 24-1251, 24-1252)

IN THE

United States Court of Appeals for the District of Columbia Circuit

DENKA PERFORMANCE ELASTOMER, LLC, *et al.*,

Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents,

and

AIR ALLIANCE HOUSTON, *et al.*,

Intervenors for Respondent.

On Petition for Review of a Final Agency Action of the Environmental Protection Agency

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

A. Parties

The following are parties in this Court:

a. Petitioners: American Chemistry Council; American Fuel & Petrochemical Manufacturers; Denka Performance Elastomer, LLC; Huntsman Petrochemical LLC; State of Louisiana; Louisiana Chemical Association; Louisiana Department of Environmental Quality; State of Texas; and Vinyl Institute, Inc.

b. Respondents: Environmental Protection Agency and Michael Regan, in his official capacity as Administrator of the Environmental Protection Agency

c. Intervenors for Respondents: Air Alliance Houston; California Communities Against Toxics; Concerned Citizens of St. John; Environmental Defense Fund; Environmental Integrity Project; Louisiana Environmental Action Network; Rise St. James Louisiana; Sierra Club; and Texas Environmental Justice Advocacy Services.

B. Rulings Under Review

Petitioners seek review of EPA's *New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical*

Manufacturing Industry and Group I & II Polymers and Resins Industry, published in the Federal Register at 89 Fed. Reg. 42,932 (May 16, 2024), JA___-___.

C. Related Cases

Counsel is aware of the following cases that raise similar challenges to EPA's regulatory authority:

The Ethylene Oxide Sterilizer Ass'n, Inc. v. EPA, No. 24-1180 (D.C. Cir.)

Huntsman Petrochemical LLC v. EPA, No. 20-1414 (D.C. Cir.)

American Chemistry Council v. EPA, Case No. 20-1418 (D.C. Cir.)

American Chemistry Council v. EPA, No. 24-1174 (D.C. Cir.)

D. Corporate Disclosure Statement

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and Circuit Rule 26.1, Petitioners provide the following statements:

The American Chemistry Counsel (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier, and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®; common sense advocacy designed to address major public policy issues; and health and environmental research and product testing. The business of chemistry is a $639 billion enterprise and a key

element of the nation's economy. It is among the largest exporters in the nation, accounting for fourteen percent of all U.S. goods exported. ACC states that it is a "trade association" for purposes of Circuit Rule 26.1(b). ACC has no parent corporation, and no publicly held company has ten percent or greater ownership in ACC.

American Fuel & Petrochemical Manufacturers (AFPM) is a national trade association including most U.S. refiners and petrochemical manufacturers. AFPM has no parent companies, and no publicly held company has a ten percent interest or greater ownership interest in AFPM. AFPM is a "trade association" within the meaning of Circuit Rule 26.1(b). AFPM is a continuing association operating for the purpose of promoting the general commercial, professional, legislative, or other interests of its membership.

Denka Performance Elastomer, LLC (DPE) is a privately owned limited liability company formed under the laws of the State of Delaware, headquartered in LaPlace, Louisiana, and authorized to do business in the State of Louisiana. DPE owns and operates a manufacturing facility in LaPlace, Louisiana that produces Neoprene by utilizing chloroprene, a chemical regulated under the EPA final rule at issue in this appeal. DPE's membership interests are held by Denka USA LLC (whose ultimate parent is Denka Company Limited) and Diana Elastomers, Inc.

(whose ultimate parent is Mitsui & Co., Ltd). Denka Company Limited and Mitsui & Co. Ltd. are each Japanese companies listed on the Tokyo Stock Exchange.

Huntsman Petrochemical LLC is organized under the laws of Delaware and its corporate headquarters are located at 10003 Woodloch Forest Drive, The Woodlands, TX 77380. Huntsman Petrochemical LLC is a manufacturer of differentiated organic chemical products. Huntsman Petrochemical LLC is a wholly owned subsidiary of Huntsman Corporation, a publicly held company. Huntsman Corporation has no parent company, and no publicly held company has a ten percent or greater ownership interest in it.

Louisiana Chemical Association is a nonprofit Louisiana corporation, composed of sixty-two members with over one hundred chemical manufacturing plant sites in Louisiana. Louisiana Chemical Association was formed in 1959 to promote a positive business climate for chemical manufacturing that ensures long-term economic growth for its member companies. Louisiana Chemical Association members are committed to excellence in safety, health, security, and environmental performance and to earning our "license to operate." Louisiana Chemical Association participates on behalf of its members in administrative proceedings and in litigation arising from those proceedings. Louisiana Chemical Association has no outstanding shares or debt securities in the hands of the public and has no parent

company. No publicly held company has a ten percent or greater ownership interest in Louisiana Chemical Association.

The Vinyl Institute, Inc. is a trade association within the meaning of Circuit Rule 26.1(b), representing the leading manufacturers of vinyl, vinyl chloride monomer, and vinyl additives and modifiers. It is incorporated under the not-for-profit corporation laws of the District of Columbia. Relevant to this case, Vinyl Institute member companies are subject to the challenged rule. The Vinyl Institute has no parent companies and has not issued any shares or debt securities to the public.

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GLOSSARY

1989 Benzene Rule	*National Emission Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants*, 54 Fed. Reg. 38,044 (Sept. 14, 1989)
1994 HON	*National Emission Standards for Hazardous Air Pollutants for Source Categories; Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks*, 59 Fed. Reg. 19,402 (April 22, 1994)
2024 Rule	*New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*, 89 Fed. Reg. 42,932 (May 16, 2024)
ACC	American Chemistry Council
AFPM	American Fuel & Petrochemical Manufacturers
DPE	Denka Performance Elastomer, LLC
EPA	Environmental Protection Agency
IRIS	Integrated Risk Information System
MACT	Maximum achievable control technology
MON	Miscellaneous Organic Chemicals NESHAP
NESHAP	National Emissions Standards for Hazardous Air Pollutants

Proposed Rule	*New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*, 88 Fed. Reg. 25,080 (Apr. 25, 2023)
RTC	EPA, *Summary of Public Comments and Responses for New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry* (March 2024)
SOCMI	Synthetic organic chemical manufacturing industry

JURISDICTIONAL STATEMENT

EPA issued the challenged agency action, *New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*, 89 Fed. Reg. 42,932 (2024 Rule) on May 16, 2024. Industry Petitioners timely petitioned for review between May 16 and July 15, 2024. This Court has jurisdiction under 42 U.S.C. § 7607(b)(1).

INTRODUCTION

In 2024, the Environmental Protection Agency (EPA) issued a new rule imposing stringent obligations on numerous hazardous air pollutants necessary for chemical manufacturing, including ethylene oxide, a gas used commonly in sterilization and production processes, and chloroprene, a chemical used in synthetic rubber production. EPA styled the 2024 Rule as one rule; in reality, it is an unprecedented series of *five* rules in one. This mega-rule imposes a raft of unduly burdensome and costly compliance requirements on synthetic organic chemical, polymer, and resin manufacturers generally—and specifically on facilities whose manufacturing processes emit ethylene oxide or chloroprene.

The 2024 Rule's breadth is matched only by its flaws. The Rule exceeds EPA's statutory authority in several respects and is arbitrary and capricious in many others.

EPA exceeded its statutory authority by mandating a series of onerous, cost-blind requirements under Section 112(f)'s one-time "residual risk" authority—which EPA already exercised years ago. EPA completed its Section 112(f) residual risk assessment for the synthetic organic compounds and polymer and resins industries in 2006 and 2008 and concluded that emissions from these source categories were acceptable and left an ample margin of safety to protect the public health. Any further regulation should have proceeded under a different subsection of the Clean Air Act, Section 112(d)(6), which authorizes periodic review and revision of EPA regulations.

But that posed a problem for EPA: When regulating under Section 112(d)(6), EPA must take costs into account. And the costs of EPA's sweeping regulations far exceed any potential benefits—to the tune of tens of millions per cancer case avoided, plus additional safety and environmental costs. So, EPA leapfrogged that colossal cost-benefit disparity by invoking Section 112(f) instead. The Clean Air Act does not permit EPA to reanimate its Section 112(f) one-and-done authority as an end-run around Section 112(d)(6)'s additional strictures.

The 2024 Rule is fatally flawed in numerous other respects. Consistent with EPA's blunderbuss approach, the Rule's centerpiece is a suite of cost-blind requirements. But even assuming EPA could issue a second round of regulations under Section 112(f), EPA may only impose cost-blind requirements where necessary to achieve an acceptable level of risk; if EPA wishes to regulate above that level, it must take cost into account. EPA's own risk assessment found that only *eight* facilities' ethylene oxide emissions posed an unacceptable risk. Yet the agency imposed sweeping requirements on every facility emitting ethylene oxide above a de minimis threshold, even if they presented no such risk—and threatened the entire source category with costly controls if their emissions ever reach that level—all without meaningful explanation or justification. EPA then set the standard for equipment in ethylene oxide service far lower than the record supported.

The upshot of all this is that more facilities must ensure that more of their equipment complies with EPA's ethylene oxide controls. To top it off, EPA also ratcheted up the controls themselves, including by removing delay-of-repair provisions, which allow facilities to postpone certain repairs for safety and feasibility purposes if doing so would reduce emissions—but only for equipment in ethylene oxide service. EPA's ethylene oxide risk assessment underscores and compounds these errors. Under Section 112(f), EPA was required to conduct a holistic residual risk assessment based on all available data. Instead, EPA homed in on a single data

point, which artificially inflated its risk assessment, while ignoring other studies that ran contrary to EPA's findings.

EPA's control requirements were also arbitrary and capricious in other respects. EPA refused to extend common-sense work practices that *would reduce* ethylene oxide and chloroprene emissions. EPA singled out pressure relief devices—safety devices that automatically open to avoid equipment malfunctions or explosions—deeming all releases from such devices per se regulatory violations, without regard to the technological feasibility or cost of eliminating those releases.

Moreover, the 2024 Rule abandoned practices that facilities had been using to control emissions since EPA first promulgated regulations for the synthetic organic chemical manufacturing industry in 1994. Startup and shutdown activities had long been exempted from compliance obligations because it is either impossible or unsafe to route emissions to certain controls during those times; EPA eliminated that practice based on its *ipse dixit* declaration that it would not, in fact, be impossible or unsafe to route emissions to controls during those times. Similarly, EPA unceremoniously dispensed with the total resource effectiveness index—a tool that helps facilities identify where pollution controls will be most effective—without regard to whether this was necessary, and brushing aside the fact that industry and State regulators had long relied on this tool.

The 2024 Rule also requires regulated facilities to monitor ambient air concentrations of certain pollutants at their "fenceline"—even though ambient emissions are subject to regulation under a different section of the Clean Air Act—including emissions from *other* equipment on site not subject to the Rule and over which the regulated source has no control. EPA ignored these statutory shortcomings, along with the fenceline monitoring program's substantial costs. EPA's chloroprene-specific fenceline monitoring requirement suffers from yet more defects, including that—by EPA's own admission—this requirement was not necessary to protect the public health with an ample margin of safety and therefore exceeded EPA's statutory authority under Section 112(f)(2).

Finally, EPA's 2024 Rule is constitutionally infirm. Section 112(f) delegates authority to EPA to "promulgate standards" required to "provide an ample margin of safety to protect public health"—*if* it first notifies Congress of a problem and Congress declines to fix it. 42 U.S.C. § 7412(f)(2)(A). Congress thus impermissibly turned over the legislative reins to EPA. It also did not provide sufficiently clear limits on how to define these terms in the first instance. That direct abdication of Congress's legislative power is a classic example of an unconstitutional delegation.

This Court should vacate the 2024 Rule.

ISSUES PRESENTED

I. Whether EPA exceeded its authority in promulgating a second set of standards under Section 112(f)(2).

II. Whether EPA's Section 112(f)(2) ethylene oxide and chloroprene controls should be set aside as arbitrary and capricious and contrary to law on multiple grounds, including that: (1) EPA unlawfully imposed standards under Section 112(f)(2) on facilities that do not present an unreasonable risk to public health; (2) EPA unlawfully defined equipment "in ethylene oxide service" more broadly than allowed by the statute; (3) EPA unlawfully eliminated delay-of-repair provisions for equipment in ethylene oxide service; and (4) EPA unlawfully performed its ethylene oxide risk assessment.

III. Whether EPA unlawfully deemed pressure releases of ethylene oxide and chloroprene in violation of the regulations.

IV. Whether EPA unlawfully refused to promulgate process vent work practices for startup and shutdown.

V. Whether EPA unlawfully eliminated the total resource effectiveness tool as a compliance option.

VI. Whether EPA unlawfully imposed a costly and burdensome fenceline monitoring program under Section 112.

VII. Whether Section 112(f) unconstitutionally delegates power from Congress to EPA.

STATUTES

Pertinent statutes are reprinted in the Addendum.

STATEMENT OF THE CASE

A. Statutory Background

The Clean Air Act tasks EPA with establishing, among other things, national emission standards for hazardous air pollutants (NESHAPs), 42 U.S.C. § 7412, and new source performance standards for other pollutants, *id.* § 7411.

Clean Air Act Section 111 governs new stationary sources that contribute to air pollution and "may reasonably be anticipated to endanger public health or welfare." *Id.* § 7411(b)(1)(A). EPA sets new source performance standards in these categories based on "the degree of emission limitation achievable through the application of the best system of emission reduction," accounting for costs "and any nonair quality health and environmental impact and energy requirements." *Id.* § 7411(a)(1).

Section 112, meanwhile, governs "hazardous" air pollutant emissions, often from the same sources. *See id.* § 7412(b)(1). Section 112 directs EPA to promulgate,

for each "source category,"[1] NESHAPs that achieve "the maximum degree of reduction in emissions of the hazardous air pollutants" by requiring sources to either meet a numerical emission limit under subsection (d), *id.* § 7412(d)(2), or, if emissions limits are not "feasible," implement a specific "design, equipment, work practice, or operational standard" under subsection (h), *id.* § 7412(h)(1). These standards are known as "maximum achievable control technology" standards (MACTs). *See Nat'l Lime Ass'n v. EPA*, 233 F.3d 625, 629 (D.C. Cir. 2000).

The Clean Air Act provides for EPA to review these NESHAP and new source performance standards and, in certain circumstances, revise its regulations. For NESHAP standards, there are two distinct grants of authority that EPA may invoke

[1] "Sources" are structures or installations that emit or may emit air pollutants. 42 U.S.C. § 7411(a)(3); 40 C.F.R. § 51.491. Under Section 112, EPA regulates sources of hazardous air pollutants, 42 U.S.C. § 7412(a)(1)-(2), and divides sources into categories—such as aerospace and hazardous waste combustors—or subcategories, like coke oven byproducts or coke oven "charging, top side and door leaks." *See National Emissions Standards for Hazardous Air Pollutants*, https://www.epa.gov/stationary-sources-air-pollution/national-emission-standards-hazardous-air-pollutants-neshap-8 (last visited Jan. 3, 2025).

The source category here is the synthetic organic chemical manufacturing industry (SOCMI) which includes chemical manufacturing process units that are part of a major source, "produce as a primary product a SOCMI chemical" listed in the regulation, and "use as a reactant or manufacture as a product, by-product, or co-product one or more of the organic [hazardous air pollutants] listed in table 2 of subpart F" of the regulation. 1994 HON, 59 Fed. Reg. 19,402, 19,405 (April 22, 1994).

at defined times within this process: a one-time residual risk review under Section 112(f)(2) and a recurring technology review under Section 112(d)(6).

1. Residual Risk Assessment: Section 112(f)(2)

The Clean Air Act of 1970 originally required EPA to directly regulate hazardous air pollutants likely to adversely affect human health. Pub. L. No. 91-604, 84 Stat. 1676, 1686 (1970). But this approach quickly proved unworkable, not least because EPA was required to list and regulate any pollutant it deemed "hazardous," without regard to costs. H.R. Rep. No. 101-490(I), at 150-151 (1990). In 1990, Congress largely switched to a *source*-based approach: EPA was responsible for identifying and regulating categories of "sources" that emitted hazardous pollutants, rather than regulating the pollutants directly. 42 U.S.C. §§ 7412(a)(1), (d)(1).

But Congress retained one feature of the earlier approach in Section 112(f). That provision grants EPA a one-time opportunity to address any residual risk to human health remaining after its initial MACT standards, based on an "assessment of a given pollutant's health risks . . . rather than the current state of control technology." *NRDC v. EPA*, 529 F.3d 1077, 1080 (D.C. Cir. 2008) (citation omitted). This process is known as EPA's "residual risk review."

This provision was intended as a backstop if Congress failed to take additional action. To invoke its Section 112(f) authority, EPA was required to "investigate and report" to Congress by November 15, 1996, any residual risk to the public health

remaining after EPA promulgated its MACT standards, with "recommendations" on whether further legislation was needed to address that risk. 42 U.S.C. § 7412(f)(1)(D). If Congress did not act on EPA's recommendations, Section 112(f)(2) provided EPA one opportunity to issue, "within 8 years after" EPA promulgated its initial source-category standards, further standards to address the residual risk if "required in order to provide an ample margin of safety to protect public health." *Id.* § 7412(f)(2)(A).

To determine whether residual risk warranted further regulation in the face of congressional inaction, EPA first considers several sources of risk data, including "actual health effects," "any available epidemiological or other health studies," and "any uncertainties in" EPA's risk assessment methodology. *Id.* § 7412(f)(1)(C), (f)(2)(A). A cancer risk is generally "acceptable" if EPA calculates the likelihood of occurrence as below 100-in-1-million, although this is not a rigid line. 54 Fed. Reg. 38,044, 38,045 (Sept. 14, 1989) (1989 Benzene Rule). If risks are "unacceptable," EPA may implement regulations to reduce any risk to an acceptable level—without considering costs. 2024 Rule, 89 Fed. Reg. at 42,967.

EPA then evaluates whether additional controls are required "to provide an ample margin of safety to protect public health." 42 U.S.C. § 7412(f)(2)(A); *see also* 136 Cong. Rec. S16895-01, 1990 WL 164490 (Oct. 27, 1990) (explaining this provision authorizes EPA to set standards "if they are necessary to protect public

health"). This two-step approach is based on EPA's approach in the 1989 Benzene Rule, which Congress later codified in the 1990 Clean Air Act Amendments. *See* 54 Fed. Reg. 38,044; 42 U.S.C. § 7412(f)(2)(A).

The "ample margin of safety" analysis considers all the holistic health and risk information from step one, alongside "technical feasibility, cost, economic impact, and other factors." 71 Fed. Reg. 76,603, 76,606 (Dec. 21, 2006). If EPA finds the existing MACT standards do not provide an "ample margin of safety," the agency may promulgate additional regulations. 42 U.S.C. § 7412(f)(2)(A). Thus, EPA may regulate "unacceptable" residual health risks without regard to costs, but EPA must account for cost when regulating any "acceptable" risks to achieve an ample margin of public safety.

As both EPA and this Court have recognized, subsection (f) does not provide for subsequent revisions or iterative rulemaking; it is a "one-time review." *See, e.g.*, 77 Fed. Reg. 55,698, 55,699 (Sept. 11, 2012) (describing Section 112(f)(2)'s residual risk review as "a one-time review that must occur within 8 years of issuance of the MACT standard"); *Louisiana Envtl. Action Network v. EPA*, 955 F.3d 1088, 1093 (D.C. Cir. 2020) ("EPA under section 112(f)(2) must conduct a one-time review within 8 years of promulgating an emission standard.").

2. Technology Review: Section 112(d)(6)

In addition to section 112(f)(2)'s one-time residual risk review, EPA has a recurring obligation to conduct what is known as a "technology review"; it must "review, and revise as necessary" any "emission standards promulgated under this section" "no less often than every 8 years" after promulgating the initial NESHAP. 42 U.S.C. § 7412(d)(6); *Louisiana Envtl. Action Network*, 955 F.3d at 1095 ("Section 112(d)(6) is the statutory mechanism for reviewing and updating emission standards applicable to listed sources."). When reviewing its regulations under Section 112(d)(6), EPA must take "into account developments in practices, processes, and control technologies," 42 U.S.C. § 7412(d)(6), as well as the "technical feasibility of requiring the implementation of these developments, along with any impacts (costs, emission reductions, risk reductions, etc.)," 75 Fed. Reg. 65,068, 65,083 (Oct. 21, 2010). The Section 112(d)(6) technology review thus specifically requires EPA to consider costs. *Association of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667, 673-674 (D.C. Cir. 2013).

Because EPA's first subsection (d)(6) review and one-time subsection (f)(2) assessment must both occur within eight years of setting the initial MACT standards, EPA typically performs the two contemporaneously in what is known as a "Risk and Technology Review."

B. Regulatory and Procedural History

1. EPA promulgates the SOCMI and Polymer & Resin standards and submits its Residual Risk Report.

In 1994, EPA issued its first NESHAP for the synthetic organic chemical manufacturing industry (SOCMI) source category, known as the Hazardous Organic NESHAP (HON). 59 Fed. Reg. 19,402 (April 22, 1994) (1994 HON). The HON promulgated MACT standards based on specific control technologies for storage vessels, process vents, transfer racks or operations, wastewater and treatment residuals, and equipment leaks. *Id.* at 19,471. The 1994 regulation also generally permitted "delay of repair," allowing owners or operators to delay repair of leaking equipment in certain circumstances. *Id.* at 19,410.

Shortly thereafter, EPA promulgated NESHAPs for the Group I and II Polymer & Resin source categories. *See* 60 Fed. Reg. 12,670 (March 8, 1995) (Group II); 61 Fed. Reg. 46,906 (Sept. 5, 1996) (Group I). The Polymer & Resin Group I NESHAP regulated source categories that produce elastomer products, including the Neoprene Production category. 61 Fed. Reg. at 46,910; 73 Fed. Reg. 76,220, 76,224 (Dec. 16, 2008). Like the HON, the Polymer & Resin Group I and II NESHAPs established MACT standards and required sources to limit pollutant emissions from specified emissions points and to control equipment leak emissions. 60 Fed. Reg. at 12,671; 61 Fed. Reg. at 46,909.

EPA belatedly submitted its Residual Risk Report to Congress in 1999. The report detailed EPA's methodology for future residual risk assessments, including how it would determine the "ample margin of safety to protect public health." *See* EPA, *Residual Risk Report to Congress* (March 1999), at ES-8 to ES-11. EPA did not recommend any legislative action; on the contrary, it found the 1990 amendments provided the agency with "adequate authority to address residual risks." *Id.* at 101-103.

2. EPA declines to revise the SOCMI or Polymer & Resin standards.

EPA was required to conduct its first periodic Section 112(d)(6) technology review for the SOCMI source category within eight years of promulgating the 1994 HON and, after Congress failed to respond to the 1999 Residual Risk Report, was authorized to conduct its one-time Section 112(f)(2) residual risk review in 2000. EPA conducted the reviews together in 2006.

EPA declined to revise the 1994 HON under either authority. In its Section 112(f)(2) assessment, EPA concluded that existing standards were sufficient to protect public health with an ample margin of safety. Under its subsection (d)(6) authority, EPA found there were no "significant developments in practices, processes, or control technologies since promulgation of the original standards in 1994." 71 Fed. Reg. at 76,605. "[B]ecause of the lack of any significant developments in" technology, as well as the "limited effect in reducing public health

risk," EPA concluded that "additional controls [were] not warranted under [Clean Air Act] section 112(d)(6)." *Id.* at 76,606. This Court upheld those determinations. *NRDC*, 529 F.3d 1077.

EPA belatedly completed its Risk and Technology Review for the Polymer & Resin Group I and II source categories in 2008. 73 Fed. Reg. 76,220. The agency concluded that existing requirements satisfied the "ample margin of safety" standard under Section 112(f)(2) and that there had been no developments warranting additional controls under either Section 112(d)(6) or Section 112(f)(2). *Id.* at 76,225-26.

3. EPA's 2024 Rule

In April 2023, EPA belatedly completed its second periodic technology review for the SOCMI and Polymer & Resin Group I and II source categories, as required by subsection (d)(6). *See* 88 Fed. Reg. 25,080 (Apr. 25, 2023) (Proposed Rule). EPA proposed several substantial revisions to the existing MACT standards as part of that technology review. It proposed eliminating existing provisions allowing facilities to rely on the "total resource effectiveness [] concept" as a compliance option and required rigorous "fenceline monitoring" requirements—monitoring along the facility's property line—for certain pollutants. *Id.* at 25,084, 25,123.

Petitioners explained that these proposed changes suffered from serious flaws: They were poorly reasoned, poorly supported, and in many respects caused more safety and emissions problems than they purported to solve.

But EPA did not stop there. The agency also claimed that it was entitled to conduct a *second residual risk assessment* under subsection (f)(2), citing data from a 2016 Integrated Risk Information System (IRIS) value for ethylene oxide and a 2010 IRIS value for chloroprene. *See id.* at 25,106, 25,083-84. Using these values, EPA proposed deeming the existing residual risks for ethylene oxide and chloroprene emissions "unacceptable" and implementing new, more stringent requirements, such as eliminating existing provisions allowing facilities to delay repairs until the next scheduled shutdown; treating releases from pressure relief devices as violations, rather than promulgating separate "work practice" standards for those periods; and adopting a *second*, even more stringent set of fenceline monitoring requirements for chloroprene. *Id.* at 25,083-84, 25,111, 25,123.

Petitioners protested that EPA's second-time invocation of its one-time subsection (f)(2) authority violated the Clean Air Act. JA___ [ACC, AFPM, and Vinyl Institute Comments 8 (ACC Comments)]. Petitioners also explained that even if EPA could theoretically engage in a second round of subsection (f)(2) review-and-regulation, EPA needed to comply with the requisite statutory process and to consider costs in evaluating whether to exercise that authority. JA___-___, ___

[ACC Comments 8-9, 13]. Commenters identified serious flaws with the 2016 IRIS value for ethylene oxide and provided evidence that EPA's cancer risk estimates were inflated. JA___-___ [Texas Commission on Environmental Quality Comments 1-3]. And commenters explained that EPA was imposing sweeping regulatory burdens on the entire SOCMI source category that went well beyond addressing the risk EPA claimed was unacceptable, including broad uniform requirements on process vents, storage vessels, equipment leaks, heat exchange systems, and wastewater for all facilities with equipment in ethylene oxide service. 2024 Rule, 89 Fed. Reg. at 42,947.

EPA adopted its proposed regulations almost verbatim, for the entire SOCMI source category. *Id.* at 42,960, 42,991. As for its newfound subsection (f)(2) authority, EPA admitted that its "risk review obligations [were] one time only," but claimed it was not "*prohibit[ed]*" "from revisiting standards promulgated under" subsection (f)(2) in response to new information. JA___, ___ [EPA, *Summary of Public Comments and Responses for New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry* (March 2024) 129, 131 (RTC)] (emphasis in original). And EPA rejected, minimized, or ignored altogether commenters' serious challenges to the changes it proposed

pursuant to its Section 112(d)(6) authority, including that it had exceeded its statutory authority by imposing requirements unnecessary to address unacceptable risk. As EPA saw it, the agency had chosen to impose "national standards that apply to specific types of sources rather than specific facilities" without explaining why this was proper over targeting "additional controls on only facilities that pose unacceptable risk." 2024 Rule, 89 Fed. Reg. at 42,983.

* * *

The 2024 Rule went into effect on July 15, 2024. Petitioners' suit followed.

SUMMARY OF ARGUMENT

I. A. Section 112(f)(2) provides EPA with one-time authority to promulgate standards EPA deems necessary to guard against residual health risks—contingent on EPA first reporting to Congress. The statutory structure and history, EPA's past practice, and this Court's prior decisions confirm this is a single-shot authority. In the 2024 Rule, however, EPA claimed the right to issue a second round of regulations under Section 112(f)(2). That it cannot do.

B. Even if EPA could issue a second round of residual risk regulations *and* forgo first reporting to Congress, EPA failed to consider costs in deciding to conduct a second round of rulemaking.

C. Even if EPA could issue a second round of residual risk regulations, EPA failed to follow the statutorily required process and first report to Congress.

II. A. Under Section 112(f)(2), EPA may regulate *unreasonable* residual health risks, without regard to costs; EPA may then regulate "acceptable" risks as needed to achieve an ample margin of safety, accounting for costs. In the 2024 Rule, however, EPA imposed costly requirements across many facilities and units that, according to EPA's own data, *did not* pose an unreasonable risk. That over-control far exceeded the agency's statutory charge. It was also arbitrary and capricious; EPA did not explain its decision to regulate far beyond what its own risk assessment justified.

B. EPA determined that in order to achieve an "acceptable" level of residual risk, EPA would impose onerous controls on all storage tanks and equipment that contain 0.1% or more of ethylene oxide. No record evidence supports that exceedingly low threshold. EPA's decision to regulate far more than necessary to achieve acceptable risks violated its statutory authority and was arbitrary and capricious.

C. EPA's removal of the delay-of-repair provision under Section 112(f)(2) for equipment in ethylene oxide service is arbitrary and capricious. That 30-year-old provision allowed facilities to delay repair until the next scheduled shutdown, avoiding unnecessary emissions and promoting worker safety. EPA failed to explain why it rescinded that commonsense provision exclusively for equipment in ethylene oxide service.

D. EPA's Section 112(f)(2) ethylene oxide regulations relied on its IRIS value risk assessment. But although the statute mandates that EPA holistically consider the available evidence and any associated uncertainties, EPA's IRIS value relied exclusively on a single, flawed analysis.[2] Petitioners pointed out the shortcomings in that analysis, but EPA arbitrarily and capriciously ignored those flaws.

III. EPA refused to extend common-sense work practice standards to pressure relief devices in ethylene oxide or chloroprene service, and instead deemed releases from those safety devices per se regulatory violations under Section 112(f)(2) despite concerns that eliminating such releases was both technologically and economically infeasible. Nor did the agency provide a reasoned basis for treating pressure relief devices in ethylene oxide or chloroprene service differently; instead, EPA relied on cherry-picked data from a single facility that does not support its conclusions.

IV. EPA imposed onerous emissions requirements on facilities' startup and shutdown processes, rather than adopting common-sense work practice standards under Section 112(h), as it has elsewhere. EPA's only rationale for treating these processes the same as steady-state operations was that some sources could meet

[2] EPA took a similarly unlawful approach with chloroprene, as explained in the separate brief from DPE and the State of Louisiana.

MACT standards during those times. That cursory statement wholly ignored industry's concerns about the safety and effectiveness of imposing those requirements during startup and shutdown.

V. A. The total resource effectiveness index, on which industry has long relied, allows sources to comply with emissions standards by targeting controls where they are needed most. EPA claimed the authority to eliminate it under Section 112(d)(6), but that provision only authorizes EPA to implement changes that are "necessary" based on underlying "developments." EPA satisfied neither of those requirements here.

B. EPA's elimination of the total resource effectiveness tool without accounting for State regulators' and industry's longstanding reliance interests was arbitrary and capricious.

VI. A. EPA exceeded its statutory authority by promulgating the fenceline monitoring program, which requires owners and operators to monitor for six hazardous air pollutants, and, if ambient pollutant concentrations exceed a "primary" or "secondary" action level, take any steps needed to meet the action levels. The fenceline monitoring action levels are ambient air quality standards, which EPA has no authority to issue under Sections 111 or 112.

B. Because it mandates that facilities monitor and potentially reduce *all* emissions of the six pollutants at their fenceline, regardless of the source, the

fenceline monitoring program impermissibly regulates sources outside of the SOCMI and Polymer & Resin Group I and II source categories.

C. Fenceline monitoring is not a permissible "work practice standard" under Section 112(h). Work practice standards are only authorized where emissions cannot be controlled or measured through traditional means. By definition, EPA's fenceline monitoring standards inappropriately apply to facilities for which EPA has already determined numeric emission standards are appropriate.

D. EPA adopted a secondary action level for chloroprene under Section 112(f)(2), but it is *well below* what is necessary to achieve an ample margin of public safety, contrary to Section 112(f)(2).

E. The fenceline monitoring program also imposes significant costs without justifiable reductions in emissions or health risks. EPA established the primary action levels under Section 112(b)(6), but it refused to fully account for the costs associated with meeting those levels, and it made no attempt to balance those significant costs against nonexistent "emissions savings." EPA also failed to consider the significant costs associated with meeting the chloroprene-specific secondary action level or even whether this is feasible.

VII. Section 112(f)(2) provides EPA with sweeping discretion to promulgate standards it deems necessary "to provide an ample margin of safety to protect public health." 42 U.S.C. § 7412(f)(2)(A). This statute fails both of the two

potential tests for an unconstitutional delegation: (1) it lacks an intelligible principle and (2) Congress has not made the key policy decision, prescribed the governing rule, or assigned non-legislative responsibilities.

STANDING

Industry Petitioners include individual companies and trade associations with members that have "self-evident" standing because they are all "directly regulated by the challenged rule." *American Fuel & Petrochemical Mfrs. v. EPA*, 3 F.4th 373, 379 (D.C. Cir. 2021).

ACC, AFPM, the Louisiana Chemical Association, and the Vinyl Institute likewise have associational standing. They all have "an obvious interest" germane to their purpose in challenging rulemaking that impacts their members, and neither the claims asserted nor the relief requested requires member participation. *American Trucking Ass'ns, Inc. v. Federal Motor Carrier Safety Admin.*, 724 F.3d 243, 247 (D.C. Cir. 2013); *see Center for Sustainable Economy v. Jewell*, 779 F.3d 588, 597-598 (D.C. Cir. 2015) (petition that "turns entirely on whether [the agency] complied with its statutory obligations" and seeks the "invalidation of agency action" does not require member participation).

Indeed, Industry Petitioners submitted extensive comments on EPA's proposed rule, explaining how and why EPA's regulations would "directly—and negatively"—affect them and their members. *American Trucking*, 724 F.3d at 247;

see JA___-___, ___-___, ___-___, ___-___, ___-___ [ACC Comments; DPE Comments; Huntsman Petrochemical LLC Comments; Louisiana Chemical Association Comments; Vinyl Institute Comments]. For example, DPE, the only facility subject to the Rule's chloroprene requirements and a member of Louisiana Chemical Association, explained in detail why it would be enormously costly to meet those requirements. *See* JA___ [DPE Comments 99]. Huntsman Petrochemical LLC, which is also a member of ACC,[3] provided extensive comments explaining that EPA's ethylene oxide regulations were "fundamentally flawed" and would require Huntsman Petrochemical LLC to adhere to "infeasible" and "unwarranted" requirements. JA___, ___, ___ [Huntsman Petrochemical LLC Comments 2, 28, 31]. ACC, AFPM, and the Vinyl Institute—trade associations that represent "the leading companies" in their fields, many of whom are members of the regulated source-categories—likewise explained in detail why each of the regulatory decisions challenged here would negatively affect their members. JA___-___ [ACC Comments 1-148]. This is enough to demonstrate Article III standing in this context. *See Sierra Club v. EPA*, 292 F.3d 895, 900 (D.C. Cir. 2002) ("[I]f the complainant is an object of the action (or forgone action) at issue—as is the case usually in review of a rulemaking," there is "little question that the action or inaction has caused him

[3] ACC, *Manufacturer Members*, https://www.americanchemistry.com/about-acc/membership/manufacturer-members (last visited Jan. 17, 2025).

injury, and that a judgment preventing or requiring the action will redress it.") (quotation marks omitted).

The State of Texas has standing because it will be directly impacted by the 2024 Rule. The Texas Commission on Environmental Quality "is responsible for ensuring that Texas' air meets public health and welfare standards established under the federal Clean Air Act." JA___, ___ [Decl. of R. Chism ¶ 3 (Chism Decl.); Decl. of K. Mills-Jurach ¶ 3 (Mills-Jurach Decl.)]. The 2024 Rule will require the Texas Commission on Environmental Quality to expend thousands of hours to review the new regulations, prepare and conduct internal training, and process permit revisions that will be required by EPA's actions. JA___-___, ___-___ [Chism Decl. at ¶¶ 14-22; Mills-Jurach Decl. at ¶¶ 14-21]. By forcing Texas to expend additional resources, the 2024 Rule creates a " 'pocketbook injury' that is incurred by the state itself." *Air All. Houston v. EPA*, 906 F.3d 1049, 1059-60 (D.C. Cir. 2018) (per curiam).[4]

STANDARD OF REVIEW

EPA's interpretation of the Clean Air Act is reviewed de novo. *United States Sugar Corp. v. EPA*, 113 F.4th 984, 991 (D.C. Cir. 2024). If the Court concludes that the relevant provisions of the Clean Air Act are ambiguous, it must "use every

[4] Texas does not sign on to the following sections: Section II(C) [delay of repair], Section IV [startup/shutdown], Section VI [FLM], and Section VII [non-delegation].

tool" at its disposal to "independently" "determine the best reading of the statute." *Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 400 (2024).

EPA's hazardous air pollutant regulations may be overturned if they are found to be unconstitutional; in excess of the agency's statutory authority; "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law"; or in violation of EPA's procedural obligations. 42 U.S.C. § 7607(d)(9). Agency action is arbitrary and capricious if the agency has "entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency," or is not in accordance with the law. *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 52 (1983).

ARGUMENT

I. EPA EXCEEDED ITS STATUTORY AUTHORITY IN THE 2024 RULE.

The text, structure, context, and history of Section 112, along with EPA's past practice and this Court's prior decisions, demonstrate that Section 112(f) permits only one residual risk review—which EPA did in 2006 and 2008 for SOCMI and Polymer & Resin Group I, respectively. EPA thus had no statutory authority to conduct a second residual risk review. But even if the Court were to infer that Section 112(f) authorizes successive residual risk reviews in some circumstances, EPA failed to follow the process required under the Clean Air Act for doing so.

A. Section 112(f)(2) Does Not Authorize Successive Residual Risk Reviews.

1. Statutory interpretation begins "with the language of the statute." *Caraco Pharm. Laboratories, Ltd. v. Novo Nordisk A/S*, 566 U.S. 399, 412 (2012) (quotation marks omitted). Section 112(f) sets forth a two-step process for residual risk analyses. First, EPA was required to "investigate and report" to Congress on any remaining residual risk after implementing technology-based standards—including an assessment of the significance of that risk, available controls, and their costs—and "recommendations" to address those risks. 42 U.S.C. § 7412(f)(1). Second, "[i]f"—but only if—"Congress does not act on any recommendation" within two years of the report, EPA could promulgate risk-based standards consistent with its recommendation. *Id.* § 7412(f)(2)(A).

The process Congress created is a one-time shot: the Act authorizes a single report to Congress, followed by a single round of residual risk rulemaking. And EPA took that shot decades ago: it issued its first set of standards for the SOCMI source category in 1994; submitted its residual risk report to Congress in 1999; and following Congress's silence, conducted residual risk reviews in 2006 and 2008, which concluded that additional standards were unnecessary. 71 Fed. Reg. at 76,605; 73 Fed. Reg. at 76,224-26. That was the end of the line for Section 112(f) review.

Nothing in the text of Section 112(f) suggests that Congress intended to vest EPA with continuing revisionary authority. Congress knows how to authorize

repeated reviews when it wants to—indeed, it did so elsewhere throughout Section 112. Subsection (c)(1) provides that EPA "shall from time to time . . . no less often than every 8 years, revise, if appropriate" the list of source categories and subcategories. 42 U.S.C. § 7412(c)(1). Subsection (d)(6) specifically requires EPA to conduct recurring technology reviews of emission standards "no less often than every 8 years." *Id.* § 7412(d)(6). Subsection (i)(8)(c) grants EPA the authority to "review the emission limitations promulgated under subparagraph (B) and revise, as necessary, such emission limitations." *Id.* § 7412(i)(8)(C). And subsection (r)(3) authorizes EPA to "revise[] from time to time" and "at least every 5 years" the list of substances posing risk of death, injury, or adverse effects if accidentally released. *Id.* § 7412(r)(3).

Subsection (f)(2) contains no such charge. It is a "well-settled principle[] of statutory interpretation" that "Congress generally acts intentionally when it uses particular language in one section of a statute but omits it in another." *Republic of Sudan v. Harrison*, 587 U.S. 1, 12 (2019) (quotation marks omitted).

Consistent with the statutory text, EPA itself has historically described its Section 112(f)(2) authority as a "one-time" process. When EPA promulgated its 2012 NESHAP for the pulp-and-paper source category, the agency explained that Section 112(f)(2)'s residual risk review "is a one-time review that must occur within 8 years of issuance of the MACT standard." 77 Fed. Reg. at 55,699. EPA reiterated

this position in 2016, 2022, and 2023.[5] And just nine days before issuing the 2024 Rule, EPA recognized a "distinct[ion]" between its Section 112(d)(6) technology review and its "one-time" Section 112(f)(2) residual risk review. 2024 Rule, 89 Fed. Reg. at 38,514. Indeed, from Section 112(f)'s enactment in 1990 until April 2024, EPA did not rely on that provision to amend residual risk standards. *See* JA___ [RTC 130 n.139]. Between April and May 2024, EPA changed course to utilize Section 112(f)(2) twice: first in the Sterilization NESHAP, issued in April 2024 and currently pending before this Court; and in the 2024 Rule at issue here. *See* Pet. Br. 18-24, *Ethylene Oxide Sterilization Ass'n v. EPA*, No. 24-1180 (D.C. Cir. Oct. 18, 2024).

This Court has likewise described EPA's authority to conduct a residual risk review under subsection (f)(2) as a one-time shot. Consistent with EPA's characterization in its briefing, this Court in *National Association for Surface Finishing* explained that Section 112 "entails two distinct, parallel analyses: a recurring 'technology review' under section 112(d)(6) and a one-time 'risk review' under section 112(f)(2)." *Nat'l Ass'n for Surface Finishing v. EPA*, 795 F.3d

[5] 81 Fed. Reg. 97,046, 97,048 (Dec. 30, 2016) (describing Section 112(f)(2)'s residual risk review as a "one-time review"); 87 Fed. Reg. 7634, 7632 n.18 (Feb. 9, 2022) (same); Proposed Rule, 88 Fed. Reg. 13,964, 13,962 n.22 (Mar. 6, 2023) (same).

1, 5 (D.C. Cir. 2015).[6] *Louisiana Envtl. Action Network* affirmed this approach, again consistent with the agency's briefing, explaining that "EPA under section 112(f)(2) must conduct a one-time review within 8 years of promulgating an emission standard." 955 F.3d at 1093.[7]

Congress well understood that, as science progresses, new information may appear; indeed, as noted above, many parts of Section 112 include express directions to conduct periodic reviews and revisions. *See*, *e.g.*, 42 U.S.C. § 7412(d)(6) (instructing EPA to "review" standards for potential technology updates "no less often than every 8 years"). It did not do so in Section 112(f)(2). Instead, this Court has previously noted that Section 112(d)(6) is "the statutory mechanism for reviewing and updating emission standards applicable to listed sources." *Louisiana Envtl. Action Network*, 955 F.3d at 1095.

But subsection (d)(6) authority comes with significant constraints, including that EPA must consider costs. 42 U.S.C. § 7412(d)(2); *see Nat'l Ass'n for Surface Finishing*, 795 F.3d at 5; *compare NRDC v. EPA*, 824 F.2d 1146, 1165 (D.C. Cir.

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[6] *See* Final Br. for Respondents 6-8, *Nat'l Ass'n for Surface Finishing*, No. 12-1459 (Sept. 29, 2014) (Section 7412(f) "provides for a one-time lookback at the promulgated standards to review any residual health risks that had not been eliminated by the initial technology-based standards.") (quotation marks omitted).

[7] *See* Final Br. for Respondents 7 & n.3, *Louisiana Envtl. Action Network*, No. 17-1257 (D.C. Cir. Sept. 4, 2019) ("[I]n contrast to the technology review under Section 7412(d)(6), the residual risk review mandated by Section 7412(f)(2) is a one-time obligation that is not repeated every eight years.").

1987) (explaining that, under subsection (f)(2), EPA "cannot under any circumstances consider cost"). EPA cannot make an end-run around that statutory requirement by purporting to discover newfound authority in a long-extant statute. *See Utility Air Reg. Grp. v. EPA*, 573 U.S. 302, 324 (2014) ("When an agency claims to discover in a long-extant statute an unheralded power . . . we typically greet its announcement with a measure of skepticism."). Congress deliberately established two distinct regulatory pathways—one a single shot, without regard to costs; the other available "as necessary," taking costs into account. EPA must abide by that decision.

2. EPA's contrary arguments are meritless. EPA maintains that although it is not *required* "to undertake another risk review," subsection (f)(2) "does not *prohibit* the EPA from" using its authority to "revis[e] standards." JA___-___ [RTC 129-131]; *see* 2024 Rule, 89 Fed. Reg. at 42,940-41. Agency action, however, requires explicit statutory authorization. *See, e.g.*, *Hikvision USA, Inc. v. FCC*, 97 F.4th 938, 944 (D.C. Cir. 2024). And although Section 112 is chock-full of provisions vesting EPA with authority to revise its regulations, *see supra* pp. 27-28, Section 112(f)(2) is not one of them. "Were courts to *presume* a delegation of power absent an express *withholding* of such power, agencies would enjoy virtually limitless hegemony." *Ry. Lab. Executives' Ass'n v. Nat'l Mediation Bd.*, 29 F.3d 655, 671 (D.C. Cir. 1994).

EPA contends that it has previously revised Clean Air Act standards where the statute did not explicitly authorize revisions. JA___ [RTC 131]. EPA's two examples—regulations adopted under Section 129, governing "solid waste combustion," and Section 213, governing "nonroad engines and vehicles"—show otherwise. *See* 42 U.S.C. §§ 7429, 7547. But although those sections do not mandate revisions, they do expressly authorize them. *See id.* § 7429(a)(5) (authorizing EPA to "review, and . . . revise such standards and requirements"); *id.* § 7547(d) (authorizing EPA to "revise or promulgate regulations as may be necessary"). That language parallels Section 112(d), as EPA elsewhere has recognized. *See* 72 Fed. Reg. 5510, 5532-33 (February 6, 2007). Section 112(f) contains no such authorization.

EPA also points its own comment in its 2006 risk and technology review for the sterilization industry, in which the agency asserted the authority "to revisit (and revise, if necessary)" its decision not to regulate, citing Clean Air Act Section 301. 2024 Rule, 89 Fed. Reg. at 42,941 (quoting 71 Fed. Reg. at 17,715). *Asserting* authority does not mean that EPA actually *has* that authority; courts, not agencies, interpret statutes. *Loper Bright*, 603 U.S. at 395. And Section 301's general grant of authority to "prescribe such regulations as are necessary to carry out [EPA's] functions under" the Clean Air Act cannot override more specific provisions elsewhere. *See* 42 U.S.C. § 7601(a); *see, e.g.*, *Bloate v. United States*, 559 U.S. 196,

207 (2010). Indeed, this Court has "consistently held" that EPA's authority to issue ancillary regulations under Section 301 "is not open-ended, particularly when there is statutory language on point." *NRDC v. EPA*, 749 F.3d 1055, 1063 (D.C. Cir. 2014). Because Section 112(f) provides "on point" guidance on this issue, "the general grant of rulemaking power embodied in section 301" cannot be read to "trump the specific provisions of the Act." *NRDC v. Reilly*, 976 F.2d 36, 41 (D.C. Cir. 1992).

EPA also invoked Clean Air Act Section 307 in its 2024 rulemaking response, which allows judicial review of:

> The promulgation or revision of any standard of performance under section 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title.

42 U.S.C. § 7607(d)(1)(C). On EPA's telling, Section 307's use of "revision" proves that Congress "explicitly assume[d] that the EPA might revisit and revise" risk-based standards set under Section 112(f). JA___ [RTC 131]. But Section 307 is not a source of agency authority; it is a broad grant of judicial jurisdiction that encompasses a host of potential challenges. Moreover, several of the other enumerated provisions *do* expressly confer authority on EPA to revise or modify its decisions, *see, e.g.*, 42 U.S.C. § 7411(b)(1)(A)—hence the use of the disjunctive "or," *Campos-Chaves v. Garland*, 602 U.S. 447, 457 (2024) ("The word 'or' is

almost always disjunctive.") (quotation marks omitted). Congress does not "hide elephants in mouseholes," using catch-all jurisdictional provisions to "alter the fundamental details" of its regulatory scheme. *Whitman v. American Trucking Ass'ns*, 531 U.S. 457, 468 (2001). EPA itself knows better; that is why, before this year, it has never found this particular elephant in that particular mousehole.

None of the cases EPA cited in its rulemaking response moves the needle. See JA___ [RTC 131]. *Medical Waste Inst. v. EPA*, involved Section 129, which expressly authorizes updates—and the particular revision was in response to this Court's remand order. 645 F.3d 420, 426 (D.C. Cir. 2011). EPA also cited cases like *FCC v. Fox Television Stations, Inc*., 556 U.S. 502, 515 (2009), and *State Farm*, 463 U.S. at 42, which the agency reads as showing that "[a]gencies have inherent authority to reconsider past decisions and to revise, replace, or repeal a decision to the extent permitted by law and supported by a reasoned explanation." JA___ [RTC 132]. But those cases instruct that such changes are limited "to the extent permitted by law," *id*., meaning they are bounded by "the scope of the authority delegated to the agency by the statute," *State Farm*, 463 U.S. at 42; *see also Fox*, 556 U.S. at 536 (Kennedy, J., concurring) ("[O]f course, the agency action must not be 'in excess of statutory jurisdiction [or] authority.' "). Section 112(f) authorizes only a single action; subsequent reviews are not "permitted by law." *See New Jersey v. EPA*, 517 F.3d 574, 583 (D.C. Cir. 2008) (where Congress limits EPA's discretion to revise

prior decisions, "EPA may not construe [the] statute in a way that completely nullifies" that limit) (quotation marks omitted).

B. Even If EPA Could Conduct A Second Rulemaking Under Section 112(f)(2), It Was Not Appropriate Here.

Even if EPA theoretically has some inherent authority to engage in a second round of residual risk rulemaking, it must first consider the costs in deciding to regulate and it must then report to Congress before acting. EPA did neither.

First, even if EPA has some inherent authority to conduct a second residual risk review, because conducting a second risk review is a "discretionary action," EPA's decision to do so must still be "reasonable." JA___ [ACC Comments 13]. As commenters explained, that necessarily requires taking cost-based considerations into account as part of "the initial decision to regulate." *See Michigan v. EPA*, 576 U.S. 743, 754 (2015); JA___, ___-___ [ACC Comments 13; DPE Comments 55-60]. These comments went to the core of EPA's authority—whether EPA can and should regulate under Section 112(f) *at all*. Yet EPA did not address them.

Instead, EPA focused its rebuttals on whether and how it was required to consider costs once it had already decided to regulate. *See* 2024 Rule, 89 Fed. Reg. at 42,969-70. That is the exact argument the dissenters pushed in *Michigan*, which the majority rejected. *See Michigan*, 576 U.S. at 758 (rejecting dissent's argument that "EPA need not explicitly analyze costs before deeming regulation appropriate, because other features of the regulatory program" will ensure "cost-effectiveness")

(quotation marks omitted). In fact, EPA here has not claimed that any "other features" will ensure "cost-effectiveness," and instead disclaimed any requirement to do so. *See infra* pp. 62-71.

It also misses the point. Petitioners argued that *even assuming* EPA could regulate under subsection (f)(2), it was not prudent to do so, given the associated costs and the fact that EPA had a congressionally authorized alternative regulatory path available under subsection (d)(6). JA___ [ACC Comments 13]. EPA's procedural failure to respond to this "relevant and significant" comment, *Lilliputian Sys., Inc. v. Pipeline & Hazardous Materials Safety Admin.*, 741 F.3d 1309, 1312 (D.C. Cir. 2014) (quotation marks omitted), and its substantive failure to consider this "important" question, was arbitrary and capricious twice over. *State Farm*, 463 U.S. at 43.

Second, even if EPA *could* theoretically conduct a second residual risk review, and had reasonably concluded it was appropriate to do so, EPA has no authority to regulate under Section 112(f) unless and until Congress is made aware of the risk and chooses not to act. 42 U.S.C. § 7412(f)(1)-(2); *see* JA___-___ [ACC Comments 8-9]. Setting aside—for the moment—the serious constitutional issues inherent in that approach, *see infra* pp. 90-95, EPA's action exceeded those limits here. EPA's 1999 risk report certainly did not promise a sequel, and EPA never submitted a second residual risk report to Congress beyond that 1999 report. EPA therefore never

triggered any supposed authority to issue new standards consistent with its unacted-upon recommendations. Congress knew how to give EPA more regulatory latitude when it saw fit. *See* 42 U.S.C. § 7412(m)(5)-(6) (instructing EPA to report to Congress on an ongoing basis and to issue additional "standards or control measures as may be necessary and appropriate" without tying that delegation of authority to congressional inaction). But "Congress did not write [Section 112(f)] that way." *Russello v. United States*, 464 U.S. 16, 23 (1983) (quotation marks omitted). If the Court interprets Section 112(f) to grant EPA broad repeat-regulatory authority, it should incorporate the constraints Congress imposed on that authority.

II. EPA'S ETHYLENE OXIDE REGULATIONS ARE UNLAWFUL.

Even if EPA could conduct a second residual risk review, EPA's ethylene oxide regulations are fundamentally flawed. EPA determined that approximately eight of the two hundred SOCMI facilities posed an "unacceptable risk," but EPA improperly imposed regulations that go far beyond addressing the risks it found. EPA's broad approach contravenes the Clean Air Act's text, which required EPA to conform its regulations to specific unacceptable risks.

What's more, EPA's regulations bear no rational relationship to achieving an acceptable level of ethylene oxide-related risk. EPA's self-described "conservative approach" to defining equipment "in ethylene oxide service," 2024 Rule, 89 Fed. Reg. at 42,973, 42,975, sweeps in far more equipment than necessary and runs

counter to the available evidence. And EPA failed to explain its refusal to extend common-sense work practice standards to pressure relief devices in ethylene oxide service (as it had done with other pressure relief devices) or to retain delay-of-repair rules for components in ethylene oxide service (as it had done for all other components).

These errors are compounded by EPA's fundamentally flawed risk assessment, which overestimated ethylene oxide risk. EPA's ethylene oxide risk assessment considered a single data source—the 2016 IRIS value—despite Congress's statutory directive to consider all available health studies. 42 U.S.C. § 7412(f)(1)(C). The data EPA relied on to calculate that IRIS value was also deeply flawed, rendering it even more unreliable. Indeed, by the time EPA proposed the 2024 Rule, new data called its findings into question—yet EPA cherry-picked the IRIS value anyway.

The Court should vacate EPA's unlawful, arbitrary, capricious, costly, and infeasible ethylene oxide regulations.

A. EPA Unlawfully Regulated Facilities And Sources That Do Not Impose Unacceptable Risks.

EPA's residual risk assessment has two components: A cost-blind determination of "acceptable risk," followed by a cost-based determination of what is needed to achieve an "ample margin of safety." *Supra* pp. 7-11. The 2024 Rule's residual risk requirements were based solely on EPA's cost-blind determination that

the HON source category posed an "unacceptable" risk. *See* 2024 Rule, 89 Fed. Reg. at 42,957. But EPA's own risk assessment concluded that, out of approximately two hundred HON facilities in the United States, *only eight* have emissions that pose such risk. *Id.* at 42,983.

EPA's sweeping requirements—which extend well beyond these eight facilities—exceeded EPA's statutory authority. Congress did not authorize EPA to use a chainsaw when a scalpel would suffice. It had to either tailor cost-blind standards to address the "unacceptable" risk it found or explain why more stringent standards were cost-justified. EPA did neither. And its failure to tether the 2024 Rule to the risks it was authorized to address also renders the Rule arbitrary and capricious.

1. EPA may impose residual risk requirements only when "such standards [are] required in order to provide an ample margin of safety to protect public health." 42 U.S.C. § 7412(f)(2)(A). "Require" means "to demand as necessary or essential." *Require*, Oxford English Dictionary (2d ed. 1989). And Congress adopted the analytical framework set out in the 1989 Benzene Rule defining an "ample margin of safety." 1989 Benzene Rule, 54 Fed. Reg. 38,044; 42 U.S.C. § 7412(f)(2)(B); *NRDC*, 529 F.3d at 1083.

This plain-text limit constrains both components of EPA's residual risk assessment framework. EPA first implements cost-blind standards to "bring risk

down to acceptable levels"; it then imposes "any *additional* controls . . . required to achieve an ample margin of safety," taking cost into account. 2024 Rule, 89 Fed. Reg. 42,967 (emphasis added). In other words, the unacceptable risk step is a lesser included part of how EPA exercises its residual risk authority. It would turn Section 112(f) on its head if EPA could do *more* than what is necessary to address unacceptable risk without explaining why those actions are "required" to achieve an ample margin of safety, keeping in mind that "required" necessitates a consideration of cost and other factors. *See* 42 U.S.C. § 7412(f)(2)(A).

The statute's structure and history confirm that plain-text reading. After the 1970s health-based approach proved unworkable, Congress adopted a source category approach that authorized EPA to impose technology-based, consistent standards across each industry category. *Supra* pp. 9-12. Once those controls are in place, subsection (f)(2) provides EPA a one-time opportunity to issue additional regulations if "required" to address residual risks to human health. *Supra* pp. 9-11. Congress thus tailored EPA's authority specifically to the problem at hand—authorizing it to take steps that were essential to address unacceptable risks that remain after technology standards are met. Congress did *not* confer on EPA a broad-based power to regulate any appreciable risk, no matter how small. And it certainly did not allow EPA to do so without "attention to cost." *Michigan*, 576 U.S. at 752.

Instead, when EPA wants to do more than regulate unacceptable risk, it must take cost into account. 42 U.S.C. § 7412(f)(2)(A).

EPA flouted those limits here. EPA found that "8 facilities have an estimated maximum cancer risk greater than 100-in-1 million." 2024 Rule, 89 Fed. Reg. at 42,960. Even among those eight, however, the risk drivers varied. *Id*. at 42,983. But EPA did not tailor its standards to address the residual risk from these eight facilities. Instead, it imposed unreasonably low thresholds for having equipment "in ethylene oxide service" which all facilities must meet lest they incur millions of dollars in control costs—all to address emissions that EPA's own analysis shows are unnecessary to reduce risk to an acceptable level.

EPA itself acknowledges that a total of seventeen facilities will have equipment "in ethylene oxide service" including the eight contributing to its "unacceptable risk" finding. *Id*. at 42,983. These other facilities face particularly significant collateral damage from EPA's broad-brush approach: All atmospheric releases from pressure relief devices are now violations; and facilities must install controls for process vents, storage vessels, and heat exchange systems; install additional as-yet unidentified controls on pressure relief devices, as any release is now considered a violation; increase leak-monitoring efforts at tens of thousands of individual locations, *see* JA___ [ACC Comments 51]; and treat wastewater that has

contacted any process stream containing ethylene oxide regardless of cost, technical feasibility, and safety.

Complying with these obligations will be enormously costly, to put it mildly. *See, e.g.*, JA___, ___, ___ [ACC Comments 105, 110, 37] (estimating $5 million to $15 million to control process vents at a single facility; $1.5 million to $9 million to control two storage tanks; and $170 million in capital costs and $58 million in annual operating costs to control additional wastewater). And for the majority of facilities, this suite of controls and the associated costs are, by EPA's own analysis, not required to bring risk to an acceptable level. 2024 Rule, 89 Fed. Reg. at 42,983; JA___ [ACC Comments 17]. Mandating such extensive risk reduction measures at sites not found to pose unacceptable risk is beyond EPA's statutory authority.

The 2024 Rule brushed aside congressional limits on EPA's authority. Indeed, EPA disclaimed any obligation to "target additional controls on only facilities that pose unacceptable risk." 2024 Rule, 89 Fed. Reg. at 42,983. Instead, EPA claimed it was authorized to "impose the same [ethylene oxide] requirements on each owner and operator" regardless of risk because the standards were "national." *Id.*

This is news. EPA has previously tailored residual risk controls to individual facilities. EPA proposed a similar approach for another residual risk rulemaking involving the same industry and pollutants. Misc. Org. Chem. NESHAP (MON), 84 Fed. Reg. 69,182 69,216 (Dec. 17, 2019) (proposed rule) (proposing controls for

the "two facilities" with equipment "in ethylene oxide service" which presented a particular degree of risk). And in the Sterilization Facilities rule issued just one month before the 2024 Rule, EPA imposed different control requirements on different facilities based on the quantity of ethylene oxide used at each facility. 89 Fed. Reg. 24,090, 24,100 (Apr. 5, 2024). EPA made no attempt in the 2024 Rule to tailor its standards to the degree of risk—much less the risk posed by specific facilities.

The Clean Air Act refutes EPA's one-size-fits-all approach. Congress authorized EPA to impose cost-blind regulations only to the extent "required" to address unacceptable risk—no more. 42 U.S.C. § 7412(f)(2)(A); *see also NRDC*, 529 F.3d at 1083. EPA calculated an "unacceptable" risk at only eight regulated facilities; it was therefore not "required" to impose controls on the *other* facilities that did not pose such risk. Either EPA must conform its standards to that required to address unacceptable risk, or it must show that its standards are required to provide an "an ample margin of safety" across all regulated sources—*after* accounting for "costs, energy, [and] safety" considerations. 42 U.S.C. § 7412(f)(2)(A). EPA has done neither.

2. EPA's one-size-fits-all imposition of stringent ethylene oxide controls was arbitrary and capricious. Even if EPA could impose broad controls under its "national standards" theory, it must still explain *why* those controls are necessary to

"ensure that risks from the source category are acceptable and that the standards provide an ample margin of safety to protect public health." 2024 Rule, 89 Fed. Reg. at 42,983. But EPA made no effort to explain why it was essential to regulate other facilities beyond the eight actually found to pose an unacceptable risk, or even for them, why uniform standards were necessary when a substantial majority of the risk arose from just one facility. Nor did EPA attempt to justify its regulations under a cost-based "ample margin of safety" analysis. *See id.* at 42,957 ("The ample margin of safety analysis for the SOCMI source category identified no other control options for [ethylene oxide] beyond those proposed to reduce risks to an acceptable level."). EPA's action is thus "overbroad, unexplained, and arbitrary." *Hikvision*, 97 F.4th at 950 (rejecting definition of "critical infrastructure" that arbitrarily regulated all assets "connected" to sixteen sectors). EPA likewise did not explain why it could not further tailor its regulation to source sub-categories, or why tailoring a regulation to "specific types of sources" would accomplish EPA's goals while tailoring it to "specific facilities" would not. This, too, was arbitrary and capricious.

B. EPA Unlawfully Defined "In Ethylene Oxide Service" To Capture More Equipment Than Necessary To Achieve Acceptable Residual Risk.

EPA's ethylene-oxide controls apply to all equipment containing ethylene oxide above EPA's established threshold. EPA set that level far too low, resulting in sweeping overcontrols far beyond what is necessary to achieve "acceptable" risk.

The 2024 Rule establishes a host of controls for and restrictions on storage vessels, heat exchangers, and other equipment "in [ethylene oxide] service." *See* 2024 Rule, 89 Fed. Reg. at 42,935. For tanks, EPA defined that term to include all tanks that contain 0.1% or more of ethylene oxide. *Id*. at 43,158. But EPA's finding of an "unacceptable risk" was driven entirely by tanks storing 100% ethylene oxide. JA___-___ [ACC Comments 41-42]. *No* data or analysis by EPA supported any risk finding for tanks storing lower concentrations of ethylene oxide. *Id.* Conversely, extensive evidence demonstrated that equipment could contain up to 5% ethylene oxide without presenting an unacceptable risk. JA___-___, ___-___ [ACC Comments 44-45, 19-27]. EPA simply ignored this data and, without citing any competing information, imposed a 0.1% ethylene oxide threshold.

EPA similarly imposed a 0.1% threshold for equipment leaks, arguing that approximately 20% of the source category risk stemmed from ethylene oxide equipment leaks. 2024 Rule, 89 Fed. Reg. at 42,975. Again, commenters presented data demonstrating that any risk came from equipment containing at least 5% ethylene oxide—meaning the 0.1% threshold was immensely over-inclusive—and that equipment containing less than 5% ethylene oxide "does not significantly contribute to risk." *Id.* at 42,974; *see* JA___ [ACC Comments 44]. Again, EPA simply ignored this data and retained its proposed 0.1% threshold.

EPA also extended its arbitrary 0.1% concentration threshold to heat exchange systems in ethylene oxide service. *See* 2024 Rule, 89 Fed. Reg. at 42,957. Using EPA's maximum assumed model leak rate, commentators provided evidence that heat exchange systems with a process concentration of 0.5% ethylene oxide by weight would result in acceptable risk, highlighting once again that a 0.1% threshold was unnecessarily conservative. JA___ [ACC Comments 56]. EPA disregarded these calculations, summarily concluding that its decision was "reasonable" in light of its "conservative approach" to "protect[]" the "public health." 2024 Rule, 89 Fed. Reg. at 42,977.

The agency's 0.1% threshold plainly runs counter to the evidence. *State Farm*, 463 U.S. at 43. Unsurprisingly, then, EPA's explanation for its action was also woefully insufficient. For both tanks and equipment leaks, EPA summarily concluded that its 0.1% threshold was "reasonable." 2024 Rule, 89 Fed. Reg. at 42,973, 42,977. But agencies must base their decisions on the data—not speculation, *Horsehead Res. Dev. Co. v. Browner*, 16 F.3d 1246, 1269 (D.C. Cir. 1994)—and EPA did not cite any record evidence disputing commenters' analyses.

Rather, EPA manufactured a specific set of circumstances under which lower concentrations of ethylene oxide "*could*" pose an unacceptable risk: "[1] in a densely-populated area with [2] a nearby receptor and [3] under specific conditions, the risks could none-the-less be unacceptable." 2024 Rule, 89 Fed. Reg. at 42,973,

42,975 (emphasis added). Yet the record did not show that this scenario actually exists—nor that EPA analyzed what threshold would be necessary to reduce those theoretical risks to an "acceptable" level.

EPA is not authorized to regulate risks that "*could*" be unacceptable. Whatever deference EPA receives on scientific decisions, *see Huntsman Petrochemical LLC v. EPA*, 114 F.4th 727 (D.C. Cir. 2024), it does not extend to far-fetched hypotheticals. Rather, Section 112(f) authorizes agency action only when it is "required" or "necessary." 42 U.S.C. § 7412(f)(2)(A). Only "essential" controls fit that bill. *See Require*, Oxford English Dictionary ("to demand as necessary or essential"); *Necessary*, Oxford English Dictionary ("indispensable, requisite, essential"). EPA's self-proclaimed "conservative approach," 2024 Rule, 89 Fed. Reg. at 42,973, 42,975, does not comport with that statutory limit.

C. EPA Unlawfully Eliminated The Delay-Of-Repair Provision For Ethylene Oxide.

EPA regulations typically require facilities to inspect for and repair leaks on specific timelines (e.g., quarterly). Some leaks, however, cannot be repaired without shutting down the entire process, which can actually *increase* emissions. This is because *planned* shutdowns may avoid excess emissions (*e.g.*, by emptying equipment and/or using temporary controls); *unplanned* shutdowns may not allow these same precautions. Delay-of-repair provisions allow facilities to postpone leak repairs until the next planned shutdown—as long as the emissions from the ongoing

leak would be lower than the emissions from an immediate shutdown. *See, e.g.*, 40 C.F.R. § 60.482-9. These provisions are fairly standard in leak detection programs, and the HON is no exception; it has permitted delay of repair since 1994. 1994 HON, 59 Fed. Reg. at 19,410.

EPA retained delay-of-repair provisions in the 2024 Rule—*except* for components in ethylene oxide service. *See* 2024 Rule, 89 Fed. Reg. at 42,975. The 2024 Rule thus requires facilities to quickly fix any and every leak above the statutory threshold—including leaks as small as 0.0049 pounds per year of ethylene oxide—no matter the emissions associated with an untimely shutdown.[8]

That was arbitrary and capricious. Eliminating the delay-of-repair program for ethylene oxide will *increase* ethylene oxide emissions, because more frequent facility shutdowns produce more emissions. Commenters explained that a single unplanned shutdown can cause ethylene oxide emissions ranging from 5 to 340 pounds and calculated that a facility would have to delay repairing a leaking valve "for over 10 years before the emissions exceeded those generated by a shutdown." JA___, ___ [ACC Comments 43, 48]. One ACC member estimated that unplanned shutdowns would result in 120 additional pounds of ethylene oxide emissions per shutdown, and that the 2024 Rule will require at least four additional shutdowns per

[8] Phrased differently, an equipment leak emitting .0049 pounds per year of ethylene oxide is *less than 0.1%* of the emissions resulting from an unexpected shutdown.

year—resulting in at least 480 more pounds of ethylene oxide emissions annually. JA___ [ACC Comments 43]. Another estimated that its emissions from isolated ethylene oxide leaks were lower than 0.3 pounds per day (or 109.5 pounds per year); one unplanned maintenance shutdown, on the other hand, would produce 340 pounds of ethylene oxide emissions. *Id*.

Shutdowns also threaten worker safety. Shutdowns cause ethylene oxide molecules to stagnate, which renders equipment inoperable and can create a highly flammable, unstable polymer, risking equipment damage or, worse, explosions. JA___ [ACC Comments 84]. Petitioners have procedures in place to evaluate worker safety when considering whether to delay repair of a leaking ethylene oxide equipment component, and shutdowns are carefully planned to allow facilities to safely "purge" equipment. JA___, ___ [ACC Comments 30, 48]. The 2024 Rule does not allow for these highly orchestrated safety precautions. Every unnecessary shutdown thus exposes workers to unneeded risks and facilities to catastrophic equipment failure.

EPA failed to meaningfully respond to these concerns or ignored them altogether. As to increased emissions, EPA claimed that "[a]llowing delay of repair would allow increased emissions of [ethylene oxide] and increased risk." 2024 Rule, 89 Fed. Reg. at 42,976. That is not necessarily true. Prior rules authorized delay of repair only when emissions from an immediate shutdown would *exceed* emissions

from delaying repair. 42 C.F.R. § 63.171(c); *see, e.g.*, 2024 Rule, 89 Fed. Reg. at 43,078. There is no situation in which allowing delay of repair under these circumstances leads to *more* emissions than an immediate shutdown. EPA's contrary conclusion "runs counter to the evidence before" it. *State Farm*, 463 U.S. at 43.

EPA addressed concerns regarding increased shutdown emissions by claiming the new controls for ethylene oxide leaks would "ensure risk remains acceptable." 2024 Rule, 89 Fed. Reg. at 42,976. But EPA failed to meaningfully account for the possibility that, even *with* controls, the emissions from an unplanned shutdown may exceed the emissions from a leak. For example, if an unplanned shutdown releases 100 pounds of ethylene oxide, implementing a 99%-effective control device would still result in an extra pound of emissions, which could still exceed emissions from a small leak. JA___ [ACC Comments 43]. Nowhere does EPA assess the impacts of these emissions increases; it simply assumes they will not exist.

The Court should vacate the portion of 2024 Rule eliminating delay of repair for equipment in ethylene oxide service.

D. EPA's Ethylene Oxide Risk Assessment Was Contrary To Law And Arbitrary And Capricious.

1. EPA unlawfully failed to consider all available health studies.

The Clean Air Act requires EPA to consider residual risk holistically, including "any available epidemiological or other health studies, risks presented by background concentrations of hazardous air pollutants, [and] any uncertainties in

risk assessment methodology or other health assessment technique." 42 U.S.C. § 7412(f)(1)(C). EPA conducted this same analysis when assessing residual risk in the 1989 Benzene Rule—which Congress expressly incorporated into Section 112(f). *Id.* § 7412(f)(2)(A)-(B). EPA flouted that statutory obligation twice over in its ethylene oxide risk assessment.

First, EPA failed to conduct a holistic residual risk assessment. Although EPA claims it evaluated "a broad set of health risk measures and information," Proposed Rule, 88 Fed. Reg. at 25,095, its ethylene oxide risk assessment relied on a single data source: the 2016 IRIS value. 2024 Rule, 89 Fed. Reg. at 42,971. The IRIS value represents the upper-bound lifetime cancer risk to an individual from continuous exposure to a small quantity of ethylene oxide, based on evidence EPA had compiled at the time the value was issued more than eight years ago. MON Reconsideration, 87 Fed. Reg. 77,988, 77,988 n.2 (Dec. 21, 2022); Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide (CASRN 75-21-8, Dec. 2016). In relying on that single value, EPA ignored a host of other evidence, including valid alternative risk assessments, epidemiological data, and other studies—many of which post-dated issuance of the IRIS value—such as those presented by the Texas Commission on Environmental Quality, and subsequent data on smokers. *See infra* pp. 56-58; *see generally* JA___-___, ___-___ [ACC Ethylene Oxide Comments 39-42; Texas Commission on Environmental Quality Comments].

EPA's exclusive reliance on the IRIS value violated Congress's instruction to consider "*any available* epidemiological or other health studies." 42 U.S.C. § 7412(f)(1)(C) (emphasis added). That threshold legal obligation concerns *what* EPA was required to do; not the technical aspects of *how* to do it. In the 1989 Benzene Rule—the rule Congress expressly incorporated into Section 112(f), *supra* at pp. 10-11—EPA considered a variety of risk values for benzene, rather than simply defaulting to the IRIS value. *See* 53 Fed. Reg. 28,496, 28,506 (July 28, 1988) (explaining that EPA considered "the geometric mean" of four risk assessments, "based on two model types (additive risk and multiplicative risk) each with two measures of exposure (unweighted and weighted cumulative exposure)"); *see also* DPE Br. 9-10. EPA's refusal to even consider other data violates the plain language of Section 112(f), and its failure to acknowledge and explain its departure from past practice renders its action arbitrary and capricious to boot. *Verizon Tel. Companies v. FCC*, 570 F.3d 294, 301 (D.C. Cir. 2009) (finding arbitrary and capricious an agency's choice to rely "virtually exclusively" on a particular metric, contrary to past practice).

Second, EPA failed to account for numerous "uncertainties" in the current scientific understanding of ethylene oxide's health effects, as the statute mandates. 42 U.S.C. § 7412(f)(1)(c) (directing agency to consider "any uncertainties in risk assessment methodology"). In other words, even if EPA was allowed to rely

exclusively on the IRIS value, it should have at *least* considered uncertainties in that value in light of the other data EPA received.

Four years ago, EPA expressly acknowledged that the 2016 ethylene oxide IRIS value "is more likely to overestimate rather than underestimate the risks," and the agency considered that uncertainty in identifying appropriate controls for another source category. MON, 85 Fed. Reg at 49,094-95. In the 2024 Rule, EPA entirely *ignored* that same uncertainty—even though both rules relied on the same IRIS value for the same chemical, *see* JA___ [RTC 11]; even though EPA repeatedly cross-referenced the MON in justifying the HON rulemaking, *see, e.g.*, JA___-___ [RTC 86-91]; and even though commenters expressly raised these uncertainty-based concerns, *see* JA___, ___-___ [RTC 19; ACC Comments 52-53]. Indeed, the only "uncertainty" EPA accounted for in the 2024 Rule was the purported risk that its model *underestimated* certain emissions, i.e., uncertainties that supported its own decision. 2024 Rule, 89 Fed. Reg. at 43,001; *see also e.g.*, JA___, ___, ___ [RTC 23, 48, 54].

EPA's failure to acknowledge the uncertainty inherent in the IRIS value itself was contrary to Section 112(f), and, separately, its failure to acknowledge or explain its change in position is arbitrary and capricious. *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016) (agencies must "provide a reasoned explanation" for a change in position).

EPA also impermissibly ignored the uncertainty created by the substantial scientific evidence Petitioners submitted into the administrative record—including, studies and evidence that were not available at the time the IRIS value was issued. *See infra* pp. 55-65. Additionally, the Texas Commission on Environmental Quality presented evidence that the 2016 IRIS value was flawed on multiple grounds and instead urged that EPA adopt the Commission's underlying data—or at least factor in the uncertainties raised by that data. JA___ [Texas Commission on Environmental Quality Comments 2]. Even assuming that EPA *could* exclusively rely on the IRIS value, EPA was still obligated to consider the extent to which this body of evidence cast "uncertaint[y]" on that value. 42 U.S.C. § 7412(f)(1)(C). EPA did not even attempt to do so.

2. EPA arbitrarily and capriciously refused to consider updated data concerning smoking risks.

All agency rulemaking must be based on evidence in the record, consider all information presented, and rationally connect the available evidence to the agency's chosen conclusion. *State Farm*, 463 U.S. at 43. Even technical and scientific determinations receive a "searching and careful" investigation. *Mississippi v. EPA*, 744 F.3d 1334, 1342 (D.C. Cir. 2013). EPA's analysis of ethylene oxide data repeatedly failed to abide by these black-letter requirements.

The most egregious failure was EPA's refusal to address new evidence concerning smoker data. Some brief history is in order. The 2016 IRIS report does

not address levels of ethylene oxide in cigarette smoke. *See generally Evaluation of the Inhalation Carcinogenicity of Ethylene Oxide*. But by the time EPA developed the MON, in 2020, new data demonstrated that smokers expose themselves to approximately ten times the amount of ethylene oxide as non-smokers—an exposure level that, if the IRIS value were correct, would generate a 1-in-10 risk of developing lymphoid cancer.[9] Yet cigarette smoking has never been causally linked to lymphoid cancer—much less at a 1-in-10 rate.[10]

Industry members, including the ACC, submitted that new data in 2020, in response to the MON notice of proposed rulemaking.[11] In response, EPA agreed that the smoker data's methodology—measuring a particular biomarker in the blood for ethylene oxide exposure—provided a "good general indicator[ ] of exposure" and would be "useful to estimate [ethylene oxide] exposure levels."[12] But EPA did not address the ultimate issue: "[N]ew information . . . demonstrates that the IRIS value overstates potential risk, resulting in unnecessarily stringent standards." JA___ [Texas Commission on Environmental Quality Comments 2].

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[9] ACC MON Ethylene Oxide Panel Comments 223, EPA-HQ-OAR-2018-0746-0096 (Feb. 18, 2020).

[10] ACC MON Comments 18, EPA-HQ-OAR-2018-0746-0097 (Mar. 19, 2020).

[11] *Id.* at 14, 221-225.

[12] MON Reconsideration Response to Comments 91-92, EPA-HQ-OAR-2018-0746-0327 (Dec. 21, 2022).

Two years later, in 2022, commenters provided an updated smoker study during the MON reconsideration—an effort the agency launched (in part) to reassess its reliance on the IRIS value. MON Reconsideration, 87 Fed. Reg. 77,988 (Dec. 21, 2022). But EPA again dismissed the smoker study's conclusions, this time concluding that the findings were "primarily of an exploratory and qualitative nature," and that the biomarkers studied did not necessarily "equate[ ] to inhaled [ethylene oxide] 'equivalents' " at low levels of exposure.[13] In other words, the data was interesting, but the methodology had not been validated at the exposure levels EPA was attempting to assess.

Several industry members sued, arguing that EPA arbitrarily and capriciously cast the smoker data aside. *See Huntsman Petrochemical*, 114 F.4th at 735, 741. In response, EPA reiterated its finding that the smoker-study methodology had not yet been sufficiently proven and added a new argument that other chemicals in cigarette smoke may have been the source of the inconsistency it presented. *Id*. at 741. This Court accepted EPA's explanation based on the data in the record when the MON rule was issued. *See id*.

Meanwhile, however, the science had advanced again: In 2023, in response to the HON notice of proposed rulemaking, commenters submitted detailed

[13] *Id.* at 66-67.

explanations showing that scientists by that time *had* validated the smoker-study methodology at the low exposure levels EPA had previously demanded. *See* JA___-___ [ACC Ethylene Oxide Comments 33-42]. Commenters also submitted an extended discussion of the specific "validation" test EPA had previously said was missing from the MON. JA___-___ [ACC Ethylene Oxide Comments 40-41].

Once again, EPA ignored this data. Instead, EPA extensively quoted its own prior responses from the MON rulemaking—which was finalized before the validation test was even conducted. JA___-___ [RTC 78-86]. EPA even asserted, with eyes wide shut, that "[f]urther information to substantiate the validity of the endogenous equivalent air concentration calculations has not been presented." JA___ [RTC 87]; *see also* JA___, ___-___ [RTC 29, 93-94] (repeatedly referring to "unvalidated" assumptions). Indeed, EPA for the first time went so far as to claim that ethylene oxide may not even be *present* in cigarette smoke, JA___ [RTC 93]—a basic fact that has been established within the scientific community for decades.[14]

That was arbitrary and capricious. EPA cannot ignore data presented to it and then sweepingly conclude that commenters had provided no new information to

[14] *See generally* Ram B. Jain, *Associations between observed concentrations of ethylene oxide in whole blood and smoking, exposure to environmental tobacco smoke, and cancers including breast cancer: data for US children, adolescents, and adults*, 27 SPRINGER NATURE, 20912 (April 5, 2020), https://doi.org/10.1007/s11356-020-08564-z.

support their claims. Regardless of the specific character of the contrary evidence, "the agency [is] to examine the relevant data and articulate a satisfactory explanation for its action." *AT&T Wireless Servs., Inc. v. FCC*, 270 F.3d 959, 968 (D.C. Cir. 2001) (quotation marks omitted). Nor can an agency decree that certain data is unreliable because of a particular shortcoming, but then ignore information correcting that shortcoming. Agencies may not "brush[] aside critical facts" that easily. *American Wild Horse Pres. Campaign v. Perdue*, 873 F.3d 914, 932 (D.C. Cir. 2017).

Rather than directly engaging with the smoker data, EPA instead leaned into the argument it presented for the first time during the MON reconsideration: that "cigarette smoke contains many carcinogens," which it claims may undercut the smoker data's findings.[15] EPA took this a step further in the 2024 Rule, claiming that "[c]hemicals in a chemical mixture may have synergistic or antagonistic interactions; treating cigarette smoke as though it were a single chemical goes against toxicological principles and risk assessment guidelines for chemical mixtures." JA___ [RTC 93]. Based on this "maybe" possibility, EPA again rejected the smoker data. *Id.*

[15] MON Reconsideration Response to Comments 68-69, EPA-HQ-OAR-2018-0746-0327 (Dec. 21, 2022).

EPA's hypothesis is both unsupported and nonsensical. Science requires more than a hypothetical possibility; it requires investigation, study, and hard data. Petitioners submitted that data; EPA brushed it off. If EPA's IRIS value is correct, moreover, then the additional ethylene oxide in cigarette smoke should cause much higher rates of lymphoid cancer in smokers than in nonsmokers—rates that simply do not exist. EPA's theory that *other* chemicals in cigarettes explain this result can only be true if those other chemicals somehow *reduced* the cancer risk that ethylene oxide would otherwise cause.

EPA's claim contradicts the very "risk assessment guidelines" it points to. As those guidelines explain—and as common sense confirms—most compounds have the same effect on the human body regardless of whether they are presented alone or as part of a mixture. *See* EPA, *Guidelines for the Health Risk Assessment of Chemical Mixtures* (1986) at 10 (cited at JA___ [RTC 93 n.106]). The effects of exposure to multiple compounds in a mixture are typically additive: The total risk posed by the mixture is calculated by adding together the risk posed by each of those compounds. *See id*. at 11.

EPA's argument, on the other hand, assumes a so-called "antagonistic interaction"—that is, the risk posed by multiple compounds in a mixture is *lower* than the risk posed by adding the risks from each compound individually. *Id*. EPA's guidelines, however, make it clear that antagonistic interactions are the exception,

not the rule. Indeed, EPA's guidelines permit consideration of "antagonistic interaction" *only* when two circumstances are present: (1) scientific data supports the theory that an antagonistic relationship exists; and (2) that data is sufficient to "permit a quantitative estimation of interaction for two chemicals." *Id.*

Here, the record contains studies and data supporting for four basic propositions:

- Cigarette smokers are exposed to substantial quantities of ethylene oxide—on the order of 10 times as much as nonsmokers.
- Cigarette smoking has been linked to a wide variety of cancers.
- Cigarette smoking has *never* been shown to cause lymphoid cancer.
- EPA's IRIS value suggests that one out of every ten smokers should develop lymphoid cancer.

Supra pp. 55-56, 58 & n.14. If EPA's IRIS value were accurate, all these facts could be true *only* if there is a significant antagonistic effect between ethylene oxide and some other chemical within cigarette smoke that *prevents* the human body from developing lymphoid cancers at the rate the IRIS value suggests it should. And yet nowhere in the entire record has EPA identified even a *theoretical* explanation for how and why ethylene oxide interacts antagonistically with some as-yet-unidentified chemical in cigarette smoke—much less studies "that permit a quantitative estimate"

of that interaction, as EPA's own guidelines require. *Guidelines for the Health Risk Assessment of Chemical Mixtures* at 11.

EPA's concern about antagonistic interactions, moreover, applies equally to the study on which the IRIS value is based. And yet the author of that study expressly concluded that exposure to the complex miasma of chemicals in cigarettes would *not* have significantly affected the study's results. JA___ [RTC 93]; Kyle Steenland et al., *Mortality Among Workers Exposed to Ethylene Oxide*, 324 THE NEW ENGLAND J. MED. 1402, 1406 (1991). EPA cannot reasonably conclude that exposure to cigarette smoke does not affect its preferred studies, while finding that same risk entirely disqualifies Petitioners' studies. *Compare* JA___ [RTC 93] (concluding that "[c]hemicals in a mixture may have synergistic or antagonistic interactions," without any supporting data), *with id.* (dismissing substantial, data-supported studies submitted by Petitioners as based on "unvalidated assumptions"). That sort of unreasonable, unexplained double-standard is arbitrary and capricious. *See Southwest Airlines Co. v. TSA*, 650 F.3d 752, 760 (D.C. Cir. 2011) ("[W]e may not allow an agency to shirk its duty to provide a reason for choosing one body of evidence over another.").

III. EPA'S PRESSURE RELIEF DEVICE REGULATIONS ARE UNLAWFUL.

Pressure relief devices (also called relief valves) are safety devices: When pressure inside a vessel exceeds a predetermined threshold, the device opens to

release the material inside and relieve that pressure, forestalling catastrophic equipment failure.

As EPA has determined, many such releases must be released into the atmosphere for safety reasons. JA___, ___-___ [ACC Comments 132; DPE Comments 96-97]; 2024 Rule, 89 Fed. Reg. at 43,013. Capturing ethylene oxide, for example, would create significant safety concerns, because the temperature fluctuations within control devices can cause explosions. JA___ [BASF Corporation Comments 6]. Some common control devices, such as flares, are also infeasible at many facilities due to physical or chemical limitations. *Id.*; JA___-___ [Vinyl Institute Comments 9-10].

Since the origin of the Clean Air Act over fifty years ago, EPA has acknowledged these safety concerns by focusing on minimizing emissions from pressure relief devices rather than prohibiting them. *See, e.g.*, 85 Fed. Reg. 40,386, 40,408 (July 6, 2020). Consistent with that approach, the 2024 Rule adopted work practice standards for *most* pressure relief devices under its Section 112(d)(6) technology update authority, reflecting EPA's assessment of how the "best performers" minimized pressure releases. *See* Proposed Rule, 88 Fed. Reg. at 25,156.

But EPA refused to apply that common-sense approach to its Section 111 new source performance standards, or to devices in ethylene oxide and chloroprene

service under its Section 112(f)(2) residual risk analysis. Instead, EPA reached the unprecedented conclusion that *all* pressure releases to the atmosphere will be violations of those standards. *See, e.g.*, 40 C.F.R. §§ 63.165(e)(3)(v)(D), 60.612a(b), 60.662a(b), 60.702a(b); *see also* 2024 Rule, 89 Fed. Reg. at 43,013, 43,025. In doing so, EPA violated both statutory sections and acted contrary to its own record and findings.

A. The 2024 Rule is Arbitrary And Capricious As Applied to Section 111 New Source Performance Standards.

Section 111 of the Clean Air Act authorizes EPA to promulgate standards that reflect the "best system of emission reduction." 42 U.S.C. § 7411(a)(1). These standards must: (1) be "adequately demonstrated"; (2) "tak[e] into account the costs of achieving such reduction"; and (3) consider "non-air quality health and environmental impacts and energy requirements." *Id.*; *see also* 2024 Rule, 89 Fed. Reg. at 43,010. EPA's assessment of the first factor was cursory; its assessment of the latter two was nonexistent.

EPA's determination that a zero-release standard has been "adequately demonstrated" rested exclusively on two Texas facilities that purportedly comply with a state law zero-release requirement. 2024 Rule, 89 Fed. Reg. at 43,012. But that Texas law is not analogous. As EPA admits, Texas *allows* atmospheric pressure releases if venting to a control device "will result in a safety concern"—which is precisely what the 2024 Rule *disallows*. *Id*. at 43,013. A rule that expressly

authorizes safety-related releases cannot "adequately demonstrate[]" a standard without such an exemption.

EPA made *no* attempt to evaluate the remaining statutory factors, using circular logic to conclude that "there are no cost, non-air quality health, environmental, or energy requirements as a result of this change." *Id*. EPA noted that releases from pressure relief devices were rare and so concluded "EPA expects that [pressure relief devices] used to prevent catastrophic failure can continue to function without reasonable concern for release." *Id*. In other words, EPA decided there would be no cost or non-air quality impacts because it assumed there would be no releases. This contradicts EPA's own conclusion that pressure relief devices "act as a last line of defense in uncommon process conditions" where pressure relief device "releases are necessary to prevent further catastrophic failure." *Id*. Releases from pressure relief devices are rare, but they do occur. EPA cannot simply assume away the very problem it already acknowledged. *Id.*

EPA also attempted to disclaim any duty to consider costs on the basis that facilities "may choose to route" pressure releases to an air pollution control device to avoid incurring a violation. *Id.* This assertion is "[p]ure applesauce." *King v. Burwell*, 576 U.S. 473, 507 (2015) (Scalia, J., dissenting). Controls are not optional so long as any release, for any reason, subjects the facility to penalties of over $100,000 *per release*. *See* 90 Fed. Reg. 1,375, 1,378 (Jan. 8, 2025). Nor may EPA

abdicate its statutory duties simply by claiming facilities "may choose" to comply with regulations. Deeming releases violations obligated EPA to evaluate the feasibility, cost, and other effects on facilities who must now attempt to prevent those releases wholesale.

The administrative record demonstrates why EPA went to such lengths to avoid considering these statutory factors: the cost could never justify its preferred approach. EPA's own estimate for similar equipment involving other hazardous air pollutants found controls would cost $80 million *per ton* of pollutant reduction, which EPA concluded was "not a cost-effective option," which left work practices as the only viable approach to minimizing emissions from pressure relief devices. Proposed Rule, 88 Fed. Reg. at 25,158; *see also* JA___ [ACC Comments 133]. Rather than try to calculate similar costs for devices controlling ethylene oxide and chloroprene, EPA simply abandoned ship. That decision violates the plain language of Section 111.

B. The 2024 Rule is Arbitrary And Capricious As Applied to Section 112 NESHAPs.

As noted above, EPA has often—including in this Rule—imposed work practices intended to reduce the emissions from pressure relief devices as part of a NESHAP. Yet EPA claimed that more draconian measures were needed to address residual risk from ethylene oxide and chloroprene, and so characterized *any* release from PRDs with even very low levels of these chemicals as a violation. *See, e.g.*, 40

C.F.R. § 63.165(e)(3)(v)(D). For four reasons, EPA's analysis is arbitrary, capricious, and does not comply with the Clean Air Act.

First, EPA violated the statute by relying upon data the Clean Air Act does not allow it to rely upon. Consequently, EPA's baseline risk evaluation significantly overstated the risks from pressure relief devices. EPA's risk assessment was based on emissions from a single plant in Port Neches, Texas, in 2018. *See* 2024 Rule, 89 Fed. Reg. at 42,966; JA___ [RTC 6]. This data should have been excluded from EPA's analysis, because emissions stemming from regulatory violations are *not* included in risk analyses. 2024 Rule, 89 Fed. Reg. at 42,965 ("Emissions events in violation of the standards, whether or not they are caused by malfunction events, are not considered as part of risk analyses."); *United States Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (D.C. Cir. 2016) (upholding EPA decision to not consider non-compliant emissions). Here, the Port Neches release violated the law. Indeed, the Texas Commission on Environmental Quality, the agency responsible for enforcing environmental rules in Texas, pursued an enforcement action against Port Neches for this very event (among others). *Texas v. Huntsman Petrochemical LLC* (District Court of Texas, 419th Judicial District, Travis County, No. D-1-GN-21-003481).

Commenters specifically asked EPA to exclude the Port Neches release (and other short-term releases) from its risk assessment for this very reason. JA___-___ [Indorama Ventures Oxides LLC Comments 33-34]. EPA rejected commenters'

requests, 2024 Rule, 89 Fed. Reg. at 42,966, based on its conclusion that Port Neches did not "violate[] the previous standards," i.e., the HON. JA___ [RTC 7]. A risk analysis, however, must exclude emissions from *any* violation—not just violations of the specific standard under review. 2024 Rule, 89 Fed. Reg. at 42,965. Even after commenters pointed out this error, *see* JA___ [Indorama Ventures Oxides LLC Comments 16], EPA refused to correct its risk analysis, JA___ [RTC 7]. Consequently, EPA imposed stringent prohibitions on pressure relief devices in ethylene oxide service based solely on emissions from a single noncompliant facility—contrary to EPA's own practice. 2024 Rule, 89 Fed. Reg. at 42,983. This is arbitrary and capricious.

Second, and further compounding EPA's error is the fact that it cherry-picked the Port Neches data to ensure that its risk assessment demonstrated maximum risk. EPA's residual risk analysis generally relied on National Emissions Inventory data from 2017 "because it provided the best available data." *Id.* at 42,965. For one facility—Port Neches—EPA chose to switch out 2018 emission data specifically "to better include pressure relief device . . . releases." JA___ [RTC 7]. EPA's use of cherry-picked data is alone arbitrary and capricious. *FDA v. American Coll. of Obstetricians & Gynecologists*, 141 S. Ct. 578, 584 (2021) (Roberts, J., concurring) ("[C]herry-picked data is no more informative than reading tea leaves").

Third, the Port Neches data—and pressure relief emissions more broadly—are incompatible with EPA's residual risk analysis. EPA's residual risk review determines whether emissions standards are "acceptable" by calculating the "maximum individual risk," meaning "the estimated risk of contracting cancer following a lifetime exposure, 24 hours per day for 70 years, at the maximum, modeled long-term ambient concentration of a pollutant." 1989 Benzene Rule, 54 Fed. Reg. at 38,044-45. Short-term violations do *not* accurately reflect "long-term" exposures and so cannot support this determination.

Commenters explained that EPA should not consider pressure releases when calculating risk, because "unplanned" and "nonroutine discharge" will not track long-term exposure models. 2024 Rule, 89 Fed. Reg. at 43,160; JA___-___ [Indorama Ventures Oxides LLC Comments 33-34]. Despite recognizing that this favored regulating pressure releases differently in all other contexts, EPA maintained that non-routine emissions of "compounds such as [ethylene oxide] and chloroprene" were the exception. 2024 Rule, 89 Fed. Reg. at 42,966; Proposed Rule, 88 Fed. Reg. at 25,155. It offered no further explanation or data supporting that conclusion—hardly a "satisfactory explanation" for its differential treatment. *State Farm*, 463 U.S. at 43.[16]

[16] Regarding chloroprene, EPA acknowledged that it "is not aware of [pressure relief device] releases occurring from the Neoprene Production source category."

Finally, characterizing atmospheric pressure releases as violations will not reduce risk compared to the work practices required for other types of devices. Pressure releases occur to prevent devastating equipment failure—and that is true regardless of the chemical the device regulates. JA___-___ [Indorama Ventures Oxides LLC Comments 33-34]. Labeling only ethylene-oxide or chloroprene releases as *per se* regulatory violations will do nothing to prevent the emergencies that require them, as EPA itself recognizes elsewhere in the Rule. 2024 Rule, 89 Fed. Reg. at 43,013 ("where [pressure relief device] releases are necessary to prevent further catastrophic failure . . . [pressure relief device] releases may be necessary").

What it *will* do is to force facilities to attempt to preemptively suppress pressure releases, even though commenters identified significant safety issues these attempts would create, including the risk of explosion, JA___ [BASF Corporation Comments 6], or other physical or chemical limitations, *id*.; JA___-___ [Vinyl Institute Comments 9-10]. This is to say nothing of the adverse safety and health impacts that would occur if a facility, threatened with noncompliance, delayed a necessary pressure relief device release too long, leading to a deflagration. And even

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Proposed Rule, 88 Fed. Reg. at 25,118. And DPE submitted comments showing that they have been trivial, averaging 23 pounds per year. JA___-___ [DPE Comments 96-97]. EPA cannot support its claim that considering all releases as violations is necessary to achieve an "acceptable" risk when it has not even evaluated the risk reductions that would be achieved by less draconian solutions.

if such controls were technologically feasible, they would be cost-prohibitive—which is precisely why EPA determined that requiring controls for all other pressure relief devices was "not a cost-effective option." *Supra* pp. 65. Again, EPA did not even attempt to justify these costs.

The 2024 Rule puts facility operators in a Hobson's choice: comply with the 2024 Rule, which could cause serious safety risks, or allow releases to occur and violate the law. If they choose the former, they risk catastrophic events that could *increase* emissions; if they choose the latter, they risk substantial penalties without reducing emissions at all. Neither action meaningfully reduces emissions or risks. This nonsensical result is a direct consequence of EPA's failure to consider both its statutory obligations and evidence in the record.

IV. EPA ERRED BY NOT PROMULGATING PROCESS VENT WORK PRACTICES FOR STARTUP AND SHUTDOWN.

EPA has long recognized that startups, shutdowns, and malfunctions are distinct from steady-state operations. *See, e.g.*, 40 C.F.R. § 63.6(e). For years, EPA acknowledged this distinction and exempted startups, shutdowns, and malfunctions from certain compliance obligations. *See, e.g.*, 1994 HON, 59 Fed. Reg. at 19,435. EPA removed those exemptions in the 2024 Rule. This creates a serious quandary for the regulated community because it is often either impossible or unsafe to route emissions to controls during these periods.

Congress anticipated this issue, however, and gave EPA an alternative: Where "it is not feasible . . . to prescribe or enforce an emission standard," the agency can instead implement a work practice standard. 42 U.S.C. § 7412(h)(1); *supra* p. 8. In the 2024 Rule, EPA invoked this authority to set work practice standards for maintenance activities. Proposed Rule, 88 Fed. Reg. at 25,159; 2024 Rule, 89 Fed. Reg. at 43,023. Although the maintenance vent provisions proposed by EPA address certain aspects of shutdowns, commenters urged EPA to further address startups and shutdowns because these operational periods present "conditions that are unsafe to control or that cannot be controlled at the efficiency required during all other periods of operation." JA___ [ACC Comments 126].

Yet EPA refused to finalize work practice standards for startups and shutdowns beyond the limited measures for maintenance vents. Its reasoning was pure *ipse dixit*: "SOCMI and [Polymer & Resin Group] II source categories can meet the applicable MACT standards at all times, including periods of startup and shutdown." 2024 Rule, 89 Fed. Reg. at 42,951. But merely stating that some industry members *can* do something is not a reasoned response to specific comments that some *cannot*. JA___-___ [ACC Comments 126-127]. Indeed, the source categories at issue cover numerous different raw materials, different products, and different processes. Some permutations are perfectly safe; others are not. EPA was required to explain itself, not simply assert its conclusion. *Environmental Health Tr. v. FCC*,

9 F.4th 893, 905 (D.C. Cir. 2021) ("[C]onclusory statements cannot substitute for a reasoned explanation.") (quotation marks omitted).

Commenters submitted numerous examples of why it was unsafe, hazardous, or ineffective to operate pollution control equipment during startup and shutdown. Commenters explained, for example, that operating control technologies during startup may cause "concentration spikes of combustible materials" at certain facilities leading to potential combustion hazards. JA___, ___-___ [ACC Comments 127, 166-167]. Another commenter explained that operating emission controls during startup, shutdown, and malfunctions would cause over-pressurization, an unsafe combustion environment, and concentration spikes of hazardous materials. JA___ [RTC 361]. EPA offered no contrary evidence or data suggesting that commenters were wrong on this score; indeed, it acknowledged that commenters had "provided examples of transient vent conditions that are unsafe to control." JA___ [RTC 362]. Instead, EPA summarily asserted that startup and shutdown would not "interfere with the ability to operate the relevant control devices according to good engineering practice"—without explaining what those "good engineering practices" might entail, what data EPA relied on, or why EPA's speculation can override first-hand evidence in the record. *See id.*

Lacking a record basis for its decision, EPA tries to shift its rulemaking burden onto industry, claiming that it could not develop work practices "based solely on the

information provided by the commenters" because commenters had "not provided sufficient information to determine: (1) what an alternative standard for each of these situations should be, and (2) whether each alternative standard reflects the level of control that applies to the best performers." *Id.* But it is not commenters' responsibility to promulgate "alternative standard[s]" or to apply the Clean Air Act's requirements to their "situations." EPA cannot ignore record evidence simply because the commenters did not also conduct their own MACT analysis of all sources to identify the "best performers." *Cf. NRDC v. EPA*, 735 F.3d 873, 880 n.3 (9th Cir. 2013) (comments need only provide "enough clarity" that "the decision maker understands the issue raised").

Regardless, EPA is wrong. Commenters provided specific examples of "alternative standard[s]" already in place. *See* JA___ [ACC Comments 127] (citing air permit that "allows limited venting during startup or shutdown of the process, so long as each occurrence of venting is recorded and the mass of pollutants during periods of startup/shutdown do not exceed a specified mass limit"); *id*. (referencing permit that allows facility to "route[] one or several process vents to a water scrubber" during startup); *id*. (facility permit "allows start-up activities 12 times per year for 10 hours per occurrence"). Thus, EPA had sufficient information to develop such standards. In fact, EPA had already developed work practices for maintenance vents, a subset of process vents covered by the 2024 Rule. *See* 40 C.F.R. § 63.113(k).

EPA explained that a small subset of process vents may fall under this provision, but the provision is not applicable to all startup and shutdown scenarios. For example, one requirement at 40 C.F.R § 63.113(k) is that prior to venting to the atmosphere, the facility must "remove liquids from the equipment as much as practical and depressurize the equipment," but this does not address starting up equipment where it is unsafe to vent emissions to a control device. JA___ [RTC 363]. And EPA never explained why it could not have applied the same approach for other process vents generally. Finally, even if EPA felt it needed additional information, it had ample authority to acquire that information as part of the rulemaking process. *See* 42 U.S.C. § 7414. It never even tried.

V. EPA IMPROPERLY REMOVED "TOTAL RESOURCE EFFECTIVENESS" AS A COMPLIANCE OPTION.

The "total resource effectiveness" concept helps determine where pollution controls will be most effective by comparing the resources spent on controlling emissions against the benefit gained. *See* JA___-___ [EPA Continuous Process Vent Memorandum, EPA-HQ-OAR-2022-0730-0094]. The total resource effectiveness "index value" was designed to indicate the most effective and least costly sources to control at any given facility. 2024 Rule, 89 Fed. Reg. at 42,992. This allows sources to comply with emissions standards by directing controls to the areas where they are needed most. *See id.*

EPA acknowledged that the total resource effectiveness index "has been an integral part of many technology-based air standards since its initial development" over 40 years ago. *Id.* at 42,994. It nevertheless removed the tool as a compliance option, citing its authority under Section 112(d)(6). That decision exceeded EPA's authority and ignored decades-long reliance interests.

A. EPA Never Found It "Necessary" To Remove The Total Resource Effectiveness Index, Nor Did It Identify A Viable Development.

EPA may only revise technology standards as "necessary" to ensure compliance with the Clean Air Act in light of technological "developments." *Nat'l Ass'n for Surface Finishing*, 795 F.3d at 5. EPA violated that provision twice over.

1. EPA did not explain why removing the total resource effectiveness index was "necessary." In fact, EPA acknowledged that "removal of the [total resource effectiveness] concept may lead to emissions *increases*." 2024 Rule, 89 Fed. Reg. at 42,994 (emphasis added). It is difficult to understand how EPA might deem it "necessary" to *increase* emissions. And EPA is not authorized to impose *unnecessary* regulatory changes.

2. EPA also did not identify any underlying "development" in "practices, processes, and control technologies," the "core requirement" of subsection (d)(6). *NRDC*, 529 F.3d at 1084. EPA certainly should fix problems caused by outdated technology. *Louisiana Envtl. Action Network*, 955 F.3d at 1093, 1095-97 (technology review ensures standards are "on pace with emerging developments").

But where no such problems exist—such as when sources have continuously and successfully used a practice for decades—EPA cannot just remove them on a whim.

EPA recognized in the proposed rule that Section 112(d)(6) requires some "development" before amending a standard and identified several categories it considers "developments," including changes in control technologies, work practices, processes, and costs. Proposed Rule, 88 Fed. Reg. at 25,105. In the 2024 Rule, however, EPA failed to identify *any* triggering "development" prompting removal of the total resource effectiveness tool, let alone one that makes removal "necessary." *See* 2024 Rule, 89 Fed. Reg. at 42,993.

Instead, EPA relies on a handful of red herrings. *First*, EPA asserts that some facilities opted to install controls instead of using the total resource effectiveness index. *Id.* But nothing about those facilities' decisions *superseded* the total resource effectiveness index. In fact, EPA recognized in the original HON that sources could *either* use the total resource effectiveness index *or* "comply directly with the control requirements without calculating the [total resource effectiveness] index." 1994 HON, 59 Fed. Reg. at 19,406. The idea that facilities would install controls therefore *was* "identified or considered during development of the original MACT standards." *Contra* 2024 Rule, 89 Fed. Reg. 42,993. That a few sources exercised this pre-existing option simply reflects the status quo.

Second, EPA asserts that removing the total resource effectiveness index simplifies an "arduous" and "theoretical" process that is "difficult to verify." *Id.* at 42,994. This is no "development." The total resource effectiveness index is no more "arduous," "theoretical" or "difficult to verify" now than when it was adopted decades ago. The opposite, in fact; it has become "an integral part of many technology-based air standards since its initial development." *Id.* EPA claims to have found "one facility" that struggled with modeling its emissions to verify total resource effectiveness index values. *Id.* at 42,993. The fact that EPA could only identify "one facility" is telling. Indeed, *many* facilities use modeling, emissions testing, and other, "less theoretical methods" to develop the information needed to calculate total resource effectiveness. *See id.* at 42,993-94. And whatever burden this tool might entail, it is justified by the value it adds in ensuring "the most significant emission sources are targeted for control." *See id.* at 42,994.

Third, EPA cites inflation as a "development" that rendered the total resource effectiveness concept unreliable. *Id.* But inflation is neither a "technological" change nor a new development; it is an economic concept in use since the Civil War,[17] and the agency developed the total resource effectiveness concept to be "independent of inflation": The concept made "fixed" assumptions about the "relative costs of

[17] Michael F. Bryan, *On the Origin and Evolution of the Word Inflation*, Fed. Reserve Bank of Cleveland, at 2 (Oct. 15, 1997).

various resources," which should hold true regardless of inflation. 2024 Rule, 89 Fed. Reg. at 42,994. Even if total resource effectiveness values have been skewed by inflation, moreover, that is just a reason to adjust for inflation—not a reason to reject the concept entirely.

Fourth, EPA claims as another "development" that multiple process vents can now be routed to a single air pollution control device. *Id.* But EPA acknowledged that fact over thirty years ago. *See, e.g.*, JA___-___ [EPA, *Guideline Series: Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry*, EPA-450/4-91-031 (August 1993) at 3-1 to 3-20]. Old information is not a new "development."

Finally, EPA references one rule it promulgated after the HON which did not use the total resource effectiveness index for a different source category (there, ethylene production). *See* 2024 Rule, 89 Fed. Reg. 42,993. This is not a technological development, either. In fact, EPA *preserved* the total resource effectiveness index in other rules for other sources even after this so-called "development." *See id*. (noting that "[m]any facilities will still be required to comply with" total resource effectiveness-based "determinations"). EPA cannot retroactively characterize its own regulatory decisions as technological "developments" to justify revising standards under Section 112(d)(6).

B. EPA's Removal Of The Total Resource Effectiveness Index Was Arbitrary And Capricious.

Industry and State regulators have long relied on the total resource effectiveness index. As EPA itself acknowledges, the tool "has been an integral part of many technology-based air standards since its initial development." 2024 Rule, 89 Fed. Reg. at 42,994; *see also, e.g.*, Ill. Admin Code tit. 35, § 218.520(c). By EPA's own estimate, more than 50 facilities operate more than 300 process vents that rely on or may need to rely on this tool. 2024 Rule, 89 Fed. Reg. at 42,995. The total resource effectiveness index thus promotes consistent application of process vent requirements across state and federal regulatory regimes and allows industry to meet emissions caps and maintain their regulatory status.

EPA wholly failed to account for these established reliance interests in removing the tool. *Id.* at 42,992-95. It was "arbitrary or capricious to ignore such matters." *Fox*, 556 U.S. at 515.

VI. EPA'S FENCELINE MONITORING PROGRAM IS UNLAWFUL.

"Fenceline monitoring" refers to the practice of placing monitors along a facility's perimeter to measure pollutant concentrations. 2024 Rule, 89 Fed. Reg. at 42,936. The 2024 Rule requires regulated sources to monitor for six pollutants, including ethylene oxide and chloroprene. If ambient concentrations exceed either the "primary" action level for any of the six pollutants, or the "secondary" action level for chloroprene, facilities must conduct a root-cause analysis and take all steps

necessary to meet those levels, regardless of the cost. *Id.* at 42,949, 42,999. EPA invoked Sections 112(d)(6) and 112(h)(2) as the authority for the primary action level and Section 112(f)(2) to set the secondary action level for chloroprene. 2024 Rule, 89 Fed. Reg. at 42,936-37, 42,947-49, 42,999.

EPA's fenceline monitoring program is costly, unnecessary, and goes well beyond EPA's authority under Section 112 in multiple respects.

A. The Fenceline Monitoring Program Regulates Ambient Air Pollutants, Which EPA Has No Authority To Do Under Section 112.

Sections 108 and 109 of the Clean Air Act require EPA to set "national ambient air quality standards" for "criteria pollutants," which specify the maximum allowable concentration of a pollutant in the ambient air. 42 U.S.C. §§ 7409, 7410. Those programs rely on monitors that measure the concentration of these pollutants in the ambient air. *See* 40 C.F.R. § 58 – Ambient Air Quality Surveillance.

Section 112 is different. It regulates different pollutants and requires EPA to set "emissions standards" (or in some cases, work practice standards) for pollutants emitted from particular emission sources in a source category. 42 U.S.C. § 7412(d).

The 2024 Rule's action levels are ambient air quality standards masquerading as source-category standards. Just like national ambient air quality standards, the action levels establish maximum allowable concentration of certain pollutants in the ambient air (not at a particular source) and require facilities to monitor these

concentrations. 2024 Rule, 89 Fed. Reg. at 42,936. Fenceline monitoring devices cannot determine whether a source is complying with the 2024 Rule's emission or work practice standards—only whether the air near a facility meets the applicable action levels. The fenceline monitoring program therefore amounts to an air quality standard that EPA lacked authority to establish under Section 112.

B. The Fenceline Monitoring Program Impermissibly Requires Regulated Sources To Reduce Emissions From Other Sources.

The 2024 Rule's fenceline monitoring requirements also hold sources that are part of the SOCMI or PR&I source category responsible for reducing emissions from other sources not covered by the 2024 Rule. That exceeds EPA's statutory authority and is arbitrary and capricious.

Section 112(d) requires EPA to set "emission standards for each category or subcategory of major sources." 42 U.S.C. § 7412(d)(1). A "source" includes any "facility, or installation which emits or may emit any [hazardous] air pollutant." *Id.* §§ 7411(a)(3), 7412(a). Chemical plants may contain multiple "sources" that are part of different source categories—and which may even be owned by different affiliates—but EPA's regulations are source-category specific.

The 2024 Rule applies to sources in the SOCMI and Polymer & Resin Group I and II categories. But the fenceline monitoring program improperly extends to other sources in different categories. As explained, monitoring devices are placed

along the property line to measure pollutant concentrations in the ambient air—not just emissions from sources in a particular source category.

To use an example provided by commenters, consider Facility A. *See* JA___-___ [West Virginia Department of Environmental Protection Comments 3-4]. Facility A is subject to the HON and owns and operates an Industrial Site that supplies services to other tenants, including wastewater treatment. Facility A does not use or produce ethylene oxide, but two tenants—Facility B and Facility C—are located inside the same Site, and both emit ethylene oxide. Facilities B and C are not subject to 2024 Rule. Facilities B and C send wastewater containing very small amounts of ethylene oxide to the Facility A for wastewater treatment and disposal. Even though Facility A does not use or produce ethylene oxide, it must conduct fenceline monitoring because it treats wastewater from Facilities B and C which have the potential to store and emit ethylene oxide. If the monitoring shows concentrations above the action level, then Facility A is responsible for reducing "facility-wide emissions" enough to meet the action level, even if virtually all those emissions come from sources not regulated by the HON.

EPA candidly acknowledged that the 2024 Rule extended beyond the entities it had authority to regulate under the 2024 Rule. *See* 2024 Rule, 89 Fed. Reg. at 43,004 (agreeing Facility A would be required to monitor and "correct" readings from Facilities B and C). EPA admitted that, based on its post-control modeling,

facilities will "likely" need to control "additional emission sources . . . that *might not be considered part of the source category*" to meet the secondary action level. *Id.* at 43,002 (emphasis added). According to EPA, "[c]ontrolling these sources reduces emissions from the entire facility, *not just the source category*, and makes it possible for operators to achieve the lower action level." *Id.* (emphasis added).

EPA cited no statutory authority that allows it to require a source to control emissions from sources outside of the regulated category. That is because there is none. Congress understood when it adopted Section 112 that there is often more than one source category at an industrial facility. *See* 42 U.S.C. § 7412(c)(1). Yet Congress was clear that EPA may only regulate "sources in the category or subcategory" under Section 112—not whole facilities. *Id.* § 7412(d)(2); *see generally id.* § 7412 (repeating the phrase sources in the "category or subcategory" 29 times). The agency thumbed its nose at Congress by doing just that.

Instead, EPA concluded it could regulate sources beyond the SOCMI and Polymer & Resin source categories because "they were included in emissions sources modeled to develop the action levels." 2024 Rule, 89 Fed. Reg. at 43,003-04. This may explain how EPA *developed* the action levels. But it does not explain why EPA has the legal authority to hold a regulated source responsible for reducing emissions from a source that is not subject to the 2024 Rule.

C. The Fenceline Monitoring Program Is Not A Permissible "Work Practice Standard."

EPA characterized its fenceline monitoring program as a "work practice standard" under Section 112(h)(2). 2024 Rule, 89 Fed. Reg. at 42,936-37, 42,999. EPA may establish work practice standards in lieu of emission standards only "if it is not feasible . . . to prescribe or enforce an emission standard," meaning that emissions "cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant" or "the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations." 42 U.S.C. § 7412(h)(2).

Neither condition is met here. In fact, most emissions regulated under the fenceline monitoring program are already regulated under separate emissions standards. *See, e.g.*, 2024 Rule, 89 Fed. Reg. at 42,935. The rest are "fugitive emissions" from equipment leaks that are already covered by a separate work practice standard. *See* JA___ [RTC 285] (EPA acknowledging fugitive emissions are already regulated in the leak detection and repair provisions).

Nor did EPA explain its inexplicable decision to impose the fenceline monitoring requirement under Section 112(h)(2). The most it said was that fenceline monitoring "would be a further improvement in the way fugitive emissions are managed." 2024 Rule, 89 Fed. Reg. at 42,999; *see, e.g.*, *id.* at 42,936. But EPA does not have authority under Section 112(h)(2) to impose requirements simply to provide

"a further improvement" without considering the costs or the fact that EPA has already imposed stringent standards for controlling fugitive emissions. *See* 42 U.S.C. § 7412(h)(2).

D. The Secondary Action Level For Chloroprene Is Not Necessary To Meet The "Ample Margin of Safety" Standard In Section 112(f)(2).

EPA exceeded its statutory authority by promulgating a secondary action level for chloroprene. Recall that Section 112(f)(2) authorized EPA to promulgate additional regulations as "required" to "provide an ample margin of safety." 42 U.S.C. § 7412(f)(2)(A). Putting aside that EPA already used this one-time authority in 2008, *supra* pp. 2, 15, EPA's second residual review for chloroprene concluded that the control requirements for chloroprene would meet the primary action levels and "reduce risk to an acceptable level and provide an ample margin of safety to protect public health." 2024 Rule, 89 Fed. Reg. at 42,947-49, 42,999, 43,002.

Yet EPA went further and set a "secondary action level" designed to "further reduce chloroprene emissions and therefore risks below these levels." *Id.* at 42,963. EPA candidly explained its purpose: The secondary action level will "increase the margin of safety and advance[] the objectives of [Clean Air Act] section 112(f)(2)," and provide "an *extra measure of protection* for surrounding communities." *Id.* at 43,000, 42,999 (emphasis added). EPA could not have been clearer: the secondary action level *goes beyond* what is necessary to protect public health with an ample margin of safety under Section 112(f)(2).

Ultimately, EPA may regulate under subsection (f)(2) only "if promulgation of such standards is *required* in order to provide an ample margin of safety to protect public health." 42 U.S.C. § 7412(f)(2)(A) (emphasis added). Because EPA admitted that its separate control requirements were sufficient to meet this standard, the agency could not go further. EPA's decision to do so exceeded its authority under Section 112(f)(2).

E. EPA Ignored Substantial Compliance Costs And Did Not Weigh Those Costs Against The Emissions Savings.

Whether regulating under Section 112(d)(6) or to meet the ample margin of safety standard under Section 112(f)(2), EPA must account for the costs of its policies. EPA estimated its fenceline monitoring program would cost $9,881,000 for total capital investment and *$33,310,000 per year* for total annualized cost. Proposed Rule, 88 Fed. Reg. at 25,146. But as commenters pointed out, that already high number represents only a small portion of the actual costs regulated entities must bear. *See, e.g.*, JA___, ___, ___ [DPE Comments 100; ACC Comments 59, 65]. EPA's failure to consider the full cost of the fenceline monitoring program renders the program both unlawful and arbitrary and capricious.

1. EPA invoked Section 112(d)(6) as its authority for setting the primary action levels. 2024 Rule, 89 Fed. Reg. at 42,936-37. As EPA has long acknowledged, it must consider costs when regulating under Section 112(d)(6)—including "the cost and feasibility of developments and corresponding emissions savings." *Nat'l Ass'n*

for Surface Finishing, 795 F.3d at 5; *see, e.g.*, Proposed Rule, 88 Fed. Reg. at 25,105 (acknowledging this requirement). EPA failed to abide by this statutory mandate in two respects when developing the fenceline monitoring requirements.

First, EPA failed to consider the full cost of the program. This analysis should have included costs associated with installing and operating the monitors, investigating the cause of any action level exceedance, and most critically, actually meeting the action levels, i.e., reducing emissions to the requisite level. EPA investigated the first category, estimating that the cost of installing and operating the monitors would be "*$33,310,000 per year*." Proposed Rule, 88 Fed. Reg. at 25,146 (emphasis added). But EPA did not attribute *any* cost to actually meeting the action levels, *see* JA___ [RTC 285], on the theory that facilities will automatically meet those levels once they comply with the 2024 Rule. *See* 2024 Rule, 89 Fed. Reg. at 43,001-02; JA___ [RTC 285].

As commenters explained, many facilities will incur substantial costs to meet the action levels. JA___, ___, ___, ___ [ACC Comments 59, 65; DPE Comments 52, 100]. EPA's only response—that there will be no cost to meeting the action levels—is no answer at all. *See* JA___ [RTC 285] ("The cost of root cause analysis and corrective action were not accounted for in the overall cost of the fenceline monitoring provisions.").

Second, and for the same reason, the exorbitant compliance costs are not justified by any potential "emissions savings." Even setting aside EPA's refusal to account for the full costs of meeting the action levels, EPA admitted the program's cost will exceed $33 million per year. Proposed Rule, 88 Fed. Reg. at 25,146. But if EPA is correct in saying that the action levels simply "reflect levels subject sources are already achieving," JA___ [RTC 285], then the fenceline monitoring program would not result in *any* emissions savings.

Rather than point to emissions savings, EPA attempted to justify the fenceline monitoring program on the theory that it will "address the uncertainty associated with emission estimates from fugitive sources," 2024 Rule, 89 Fed. Reg. at 43,001, and improve "the way fugitive emissions are managed," *id*. at 42,999. But Congress did not authorize EPA to impose costly programs under Section 112(d)(6) that will "address uncertainty" or improve emissions-management; it authorized EPA to impose programs only where "emissions savings" justified the cost. *Nat'l Ass'n for Surface Fishing*, 795 F.3d at 5. And even if these supposed benefits did matter, EPA made no attempt to quantify them—and thus no attempt to determine whether they would justify the program's substantial costs. *See, e.g.*, JA___ [RTC 236] (concluding that, "[i]f all facilities" met the action level "or lower, we predict significant reductions of actual risk would occur, even beyond reductions

attributable to applying our [ethylene oxide]-specific standards," but making no effort to quantify those reductions).

2. EPA also failed to consider costs in setting the secondary action level for chloroprene. Even assuming EPA could issue a second set of regulations under Section 112(f)(2), *supra* pp. 26-37, EPA must consider the "costs and economic impacts" of its regulations in determining what constitutes an ample margin of public safety. 1989 Benzene Rule, 54 Fed. Reg. at 38,045; *see* 42 U.S.C. § 7412(f)(2). EPA failed to do so here.

Achieving that secondary action level will be enormously costly. The chloroprene action levels apply only to DPE's Neoprene production plant, and EPA concedes that, even if DPE fully complied with the 2024 Rule's emission standards, DPE would still need to reduce emissions by an *additional 62%* to meet the secondary action level. *See* JA___ [DPE Comments 99]; *see* 2024 Rule, 89 Fed. Reg. at 43,002 (setting primary action level at 0.8 ug/m and secondary action level at 0.3 ug/m). The cost of meeting this secondary action level is in addition to the cost of complying with the 2024 Rule's other requirements—estimated to cost between $10.1 million and $26 million per year. *See* Proposed Rule, 88 Fed. Reg. at 25,122 (Table 9); JA___ [DPE Comments 52].

EPA made no effort to estimate the cost of meeting the secondary action level. Instead, it asserted—without any analysis or explanation—that DPE can simply

"employ additional facility-wide measures" to meet it. 2024 Rule, 89 Fed. Reg. at 43,000. EPA made no effort to identify what these measures might be.

VII. SECTION 112(F) IS AN UNCONSTITUTIONAL DELEGATION.

As discussed, before EPA can issue a residual risk standard, it must provide Congress recommendations for legislation to address any remaining residual risks. *Supra* pp. 36-37. If Congress declines to act, Section 112(f) authorizes EPA to "promulgate standards" it determines are "required in order to provide an ample margin of safety to protect public health." 42 U.S.C. § 7412(f)(2)(A). But the Act provides no definition of or principled limit on what is "required" or "ample." This wholesale delegation of Congress's legislative power to act when Congress fails to is unconstitutional.

Article I vests "All legislative Powers" in the "Congress of the United States." U.S. Const. Art. I, § 1. The Supreme Court has long recognized that Congress cannot "delegate" away those "powers which are strictly and exclusively legislative." *Wayman v. Southard*, 23 U.S. 1, 42-43 (1825). This rule is "vital to the integrity and maintenance of [our]system of government." *Marshall Field & Co. v. Clark*, 143 U.S. 649, 692 (1892). In *Whitman*, the Supreme Court upheld a different provision of the Clean Air Act delegating to EPA the authority to establish "ambient air quality standards requisite to protect the public health" with an "adequate margin of safety." 42 U.S.C. § 7409(b)(1); *see Whitman*, 531 U.S. at 472-476. That delegation was

narrower than the one in Section 112(f). Moreover, since *Whitman*, five Justices have expressed their desire to revitalize the non-delegation doctrine. *See Paul v. United States*, 140 S. Ct. 342 (2019) (Kavanaugh, J., respecting the denial of certiorari); *Gundy v. United States*, 588 U.S. 128, 148 (2019) (Alito, J, concurring in the judgment); *id*. at 179 (Gorsuch, J., dissenting, joined by Roberts, C.J., and Thomas, J.). The Supreme Court also recently granted review in a case raising a non-delegation question; the decision there may fundamentally alter the Court's non-delegation jurisprudence. *See Consumers' Rsch. v. FCC*, 109 F.4th 743 (5th Cir. 2024), *cert granted*, No. 24-354, 2024 WL 4864036 (U.S. Nov. 22, 2024).

Petitioners preserve their non-delegation argument pending the decision in *Consumers' Research* and, if necessary, further review in this case. But because Section 112(f) presents such an extreme delegation, it is unconstitutional even under current jurisprudence.

First, under the Supreme Court's existing doctrine, "a statutory delegation is constitutional" only if Congress legislates "an intelligible principle to which the person or body authorized to exercise the delegated authority is directed to conform." *Gundy*, 588 U.S. at 135 (plurality op.) (quotation marks and brackets omitted). No such "intelligible principle" exists here. The statute directs EPA to issue whatever emissions standards EPA deems "required in order to provide an ample margin of safety to protect public health"—but nowhere defines what

constitutes an "ample margin of safety." 42 U.S.C. § 7412(f)(2)(A). As this Court has explained, "ample" leaves "EPA great latitude in meeting its responsibility." *NRDC*, 824 F.2d at 1153 (quoting *Environmental Def. Fund v. EPA*, 598 F.2d 62, 81 (D.C. Cir. 1978)). This "deliberately ambiguous" language effectively permits EPA to promulgate whatever regulations it deems appropriate, subject only to arbitrary and capricious review. *See NRDC*, 529 F.3d at 1081. This stands in stark contrast to the provision at issue in *Whitman*, Clean Air Act Section 109(b)(1). That provision authorized EPA only to set ambient air quality standards, with EPA's authority to impose regulations still subject to Section 110's detailed requirements. *See Whitman*, 531 U.S. at 472.

The non-delegation problem is even more troubling given the statute's structure. Under Section 112(f), EPA may promulgate residual risk standards only if Congress refuses to act on EPA's recommendations. In other words, after Congress declines to exercise legislative authority, Section 112(f) transfers that same authority to EPA, allowing the agency to do by executive fiat what Congress refused to do through bicameralism and presentment. This Court should reject this scheme to short-circuit the normal legislative process.

Second, Section 112(f) also flunks the stricter nondelegation test endorsed by Justice Gorsuch in *Gundy*—joined by Chief Justice Roberts and Justice Thomas. *Gundy*, 588 U.S. at 149 (Gorsuch, J., dissenting). Under that test, Congress may

delegate authority only in three discrete circumstances: (1) If "Congress makes the policy decisions," "it may authorize another branch to 'fill up the details' "; (2) if "Congress prescribes the rule governing private conduct, it may make the application of that rule depend on executive fact-finding"; and (3) "Congress may assign the executive and judicial branches certain non-legislative responsibilities." *Id*. at 157-159.

This case fails all three of those criteria: Congress did *not* make the key policy decision in Section 112(f). The Clean Air Act nowhere explains what makes a margin of safety sufficiently "ample," nor prescribes what regulations would be appropriate to achieve it. Congress announced a standard dependent on executive factfinding—but it did not "prescribe" the governing rule. Nor did Congress delegate anything other than sheer legislative authority. Instead, Congress authorized EPA to act if and only if Congress *itself* refused to pass legislation. This is precisely the circumstance in which Congress improperly transferred its power to make laws to the executive.

In response to comments raising these concerns, *see* JA___-___ [Huntsman Petrochemical LLC Comments, 15-17], EPA argued this delegation falls "within the range of" those previously approved by the Supreme Court, citing *Whitman* and two cases from the 1930s, JA___ [RTC 137]. That overreads *Whitman* and fails to account for the existing state-of-play. EPA also cited Congress's decision to

incorporate the 1989 Benzene Rule's framework into Section 112(f)(2), which provides some guidance as to the meaning of "ample." JA___-___ [RTC 137-138]. But the 1989 Benzene Rule only addresses *when* EPA may act, not *how* to act; once EPA finds that regulation is "required in order to provide an ample margin of safety," 42 U.S.C. § 7412(f)(2)(A), it reads the statute to authorize unfettered discretion to impose whatever regulations it desires, without considering costs or environmental risks. This Rule is a prime example: EPA imposed a host of illogical requirements, from unachievable emission limitations and fenceline monitoring requirements that go beyond the source category, to blanket prohibitions on pressure relief devices regardless of safety risks or environmental harm. EPA nevertheless defends these actions not by claiming they are consistent with what Congress wanted EPA to impose to address residual risk, but by claiming Congress imposed *no limitation* on what EPA can impose. Whether measured against *Whitman* or *Gundy*, Section 112(f)(2) represents an impermissible delegation of legislative power.

CONCLUSION

For the foregoing reasons, the challenged aspects of EPA's 2024 Rule should be vacated.

Respectfully submitted,

January 17, 2025

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/s/ Catherine E. Stetson

Catherine E. Stetson

ADDENDUM

TABLE OF CONTENTS

42 U.S.C. § 7411

§ 7411. Standards of performance for new stationary sources

(a) Definitions

For purposes of this section:

(1) The term "standard of performance" means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

(2) The term "new source" means any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.

(3) The term "stationary source" means any building, structure, facility, or installation which emits or may emit any air pollutant. Nothing in subchapter II of this chapter relating to nonroad engines shall be construed to apply to stationary internal combustion engines.

* * *

(b) List of categories of stationary sources; standards of performance; information on pollution control techniques; sources owned or operated by United States; particular systems; revised standards

(1)(A) The Administrator shall, within 90 days after December 31, 1970, publish (and from time to time thereafter shall revise) a list of categories of stationary sources. He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.

* * *

42 U.S.C. § 7412

§ 7412. Hazardous air pollutants

(a) Definitions

For purposes of this section, except subsection (r)--

(1) Major source

The term “major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The Administrator may establish a lesser quantity, or in the case of radionuclides different criteria, for a major source than that specified in the previous sentence, on the basis of the potency of the air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors.

(2) Area source

The term “area source” means any stationary source of hazardous air pollutants that is not a major source. For purposes of this section, the term “area source” shall not include motor vehicles or nonroad vehicles subject to regulation under subchapter II.

* * *

(c) List of source categories

(1) In general

Not later than 12 months after November 15, 1990, the Administrator shall publish, and shall from time to time, but no less often than every 8 years, revise, if appropriate, in response to public comment or new information, a list of all categories and subcategories of major sources and area sources (listed under paragraph (3)) of the air pollutants listed pursuant to subsection (b). To the extent practicable, the categories and subcategories listed under this subsection shall be consistent with the list of source categories established pursuant to section 7411 of this title and part C. Nothing in the preceding sentence limits the Administrator's authority to establish subcategories under this section, as

appropriate.

* * *

(d) Emission standards

(1) In general

The Administrator shall promulgate regulations establishing emission standards for each category or subcategory of major sources and area sources of hazardous air pollutants listed for regulation pursuant to subsection (c) in accordance with the schedules provided in subsections (c) and (e). The Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards except that, there shall be no delay in the compliance date for any standard applicable to any source under subsection (i) as the result of the authority provided by this sentence.

(2) Standards and methods

Emissions standards promulgated under this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies, through application of measures, processes, methods, systems or techniques including, but not limited to, measures which--

(A) reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications,

(B) enclose systems or processes to eliminate emissions,

(C) collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point,

(D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in subsection (h), or

(E) are a combination of the above.

None of the measures described in subparagraphs (A) through (D) shall, consistent with the provisions of section 7414(c) of this title, in any way compromise any United States patent or United States trademark right, or any confidential business information, or any trade secret or any other intellectual property right.

* * *

(6) Review and revision

The Administrator shall review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section no less often than every 8 years.

* * *

(f) Standard to protect health and environment

(1) Report

Not later than 6 years after November 15, 1990, the Administrator shall investigate and report, after consultation with the Surgeon General and after opportunity for public comment, to Congress on--

(A) methods of calculating the risk to public health remaining, or likely to remain, from sources subject to regulation under this section after the application of standards under subsection (d);

(B) the public health significance of such estimated remaining risk and the technologically and commercially available methods and costs of reducing such risks;

(C) the actual health effects with respect to persons living in the vicinity of sources, any available epidemiological or other health studies, risks presented by background concentrations of hazardous air pollutants, any uncertainties in risk assessment methodology or other health assessment technique, and any negative health or environmental consequences to the community of efforts to reduce such risks; and

(D) recommendations as to legislation regarding such remaining risk.

(2) Emission standards

(A) If Congress does not act on any recommendation submitted under paragraph (1), the Administrator shall, within 8 years after promulgation of standards for each category or subcategory of sources pursuant to subsection (d), promulgate standards for such category or subcategory if promulgation of such standards is required in order to provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990) or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. Emission standards promulgated under this subsection shall provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990), unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. If standards promulgated pursuant to subsection (d) and applicable to a category or subcategory of sources emitting a pollutant (or pollutants) classified as a known, probable or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million, the Administrator shall promulgate standards under this subsection for such source category.

(B) Nothing in subparagraph (A) or in any other provision of this section shall be construed as affecting, or applying to the Administrator's interpretation of this section, as in effect before November 15, 1990, and set forth in the Federal Register of September 14, 1989 (54 Federal Register 38044).

(C) The Administrator shall determine whether or not to promulgate such standards and, if the Administrator decides to promulgate such standards, shall promulgate the standards 8 years after promulgation of the standards under subsection (d) for each source category or subcategory concerned. In the case of categories or subcategories for which standards under subsection (d) are required to be promulgated within 2 years after November 15, 1990, the Administrator shall have 9 years after promulgation of the standards under subsection (d) to make the determination under the preceding sentence and, if required, to promulgate the standards under this paragraph.

* * *

(h) Work practice standards and other requirements

(1) In general

For purposes of this section, if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the Administrator's judgment is consistent with the provisions of subsection (d) or (f). In the event the Administrator promulgates a design or equipment standard under this subsection, the Administrator shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

(2) Definition

For the purpose of this subsection, the phrase “not feasible to prescribe or enforce an emission standard” means any situation in which the Administrator determines that--

(A) a hazardous air pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State or local law, or

(B) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

* * *

(m) Atmospheric deposition to Great Lakes and coastal waters

* * *

(5) Report

Within 3 years of November 15, 1990, and biennially thereafter, the Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall submit to the Congress a report on the results of any monitoring, studies, and investigations conducted pursuant to this subsection. Such report shall include, at a minimum, an assessment of--

(A) the contribution of atmospheric deposition to pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(B) the environmental and public health effects of any pollution which is attributable to atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(C) the source or sources of any pollution to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters which is attributable to atmospheric deposition;

(D) whether pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain or coastal waters cause or contribute to exceedances of drinking water standards pursuant to the Safe Drinking Water Act or water quality standards pursuant to the Federal Water Pollution Control Act or, with respect to the Great Lakes, exceedances of the specific objectives of the Great Lakes Water Quality Agreement; and

(E) a description of any revisions of the requirements, standards, and limitations pursuant to this chapter and other applicable Federal laws as are necessary to assure protection of human health and the environment.

(6) Additional regulation

As part of the report to Congress, the Administrator shall determine whether the other provisions of this section are adequate to prevent serious adverse effects to public health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters of hazardous air pollutants (and their atmospheric transformation products). The Administrator shall take into consideration the tendency of such pollutants to bioaccumulate. Within 5 years after November 15, 1990, the Administrator shall, based on such report and determination, promulgate, in accordance with this section, such further emission standards or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways. Any requirements promulgated pursuant to this paragraph with respect to coastal waters shall only apply to the coastal waters of the States which are subject to section 7627(a) of this title.

* * *

(r) Prevention of accidental releases

* * *

(3) List of substances

The Administrator shall promulgate not later than 24 months after November 15, 1990, an initial list of 100 substances which, in the case of an accidental release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. For purposes of promulgating such list, the Administrator shall use, but is not limited to, the list of extremely hazardous substances published under the Emergency Planning and Community Right-to-Know[6] Act of 1986, with such modifications as the Administrator deems appropriate. The initial list shall include chlorine, anhydrous ammonia, methyl chloride, ethylene oxide, vinyl chloride, methyl isocyanate, hydrogen cyanide, ammonia, hydrogen sulfide, toluene diisocyanate, phosgene, bromine, anhydrous hydrogen chloride, hydrogen fluoride, anhydrous sulfur dioxide, and sulfur trioxide. The initial list shall include at least 100 substances which pose the greatest risk of causing death, injury, or serious adverse effects to human health or the environment from accidental releases. Regulations establishing the list shall include an explanation of the basis for establishing the list. The list may be revised from time to time by the Administrator on the Administrator's own motion or by petition and shall be reviewed at least every 5 years. No air pollutant for which a national primary ambient air quality standard has been established shall be included on any such list. No substance, practice, process, or activity regulated under subchapter VI shall be subject to regulations under this subsection. The Administrator shall establish procedures for the addition and deletion of substances from the list established under this paragraph consistent with those applicable to the list in subsection (b).

* * *

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF TEXAS, *Petitioners,* v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, Administrator, United States Environmental Protection Agency *Respondents*.	§	Case No. 24-1246 (Consolidated with 24-1135, 24-1228, and 24-1246)

DECLARATION OF RICHARD CHISM IN SUPPORT OF PETITIONER STATE OF TEXAS' PETITION FOR REVIEW

I, Richard Chism, hereby declare as follows:

1. My name is Richard Chism and I am the Director of the Office of Air ("OA") at the Texas Commission on Environmental Quality ("TCEQ," "agency," or "commission"), a position I have held since December 2022. I have a Bachelor of Science degree in Ecology from Texas A&M University. Prior to becoming the Director of the OA, I held various positions at the agency, including Director of the Monitoring Operations Division in the Office of Compliance and Enforcement. I have worked at

TCEQ and its predecessor agencies since 1999. I am over the age of eighteen and competent to testify about the matters in this declaration based on my personal knowledge, my experience with the agency, and information provided to me by TCEQ personnel.

I. Texas Commission on Environmental Quality

2. TCEQ is composed of three commissioners, appointed by the Governor, with the advice and consent of the Texas Senate, for staggered six-year terms. TCEQ is the State agency charged with implementing and enforcing the State's various environmental regulatory programs. *See* Tex. Water Code ch. 5. It is one of the largest environmental agencies in the world. TCEQ's mission is to protect the state's public health and natural resources consistent with sustainable economic development by: (1) basing decisions on the law, common sense, sound science, and fiscal responsibility; (2) ensuring that regulations are necessary, effective, and current; (3) applying regulations clearly and consistently; (4) ensuring consistent, just, and timely enforcement when environmental laws are violated; (5) ensuring meaningful public participation in the decision-making process; (6) promoting and fostering voluntary compliance with environmental laws and providing flexibility in achieving environmental

goals; and (7) hiring, developing, and retaining a high-quality, diverse workforce. TCEQ's goal is clean air, clean water, and the safe management of waste.

3. TCEQ is responsible for ensuring that Texas' air meets public health and welfare standards established under the federal Clean Air Act ("CAA"). *See* Texas Clean Air Act, Tex. Health & Safety Code ch. 382 and Tex. Water Code, ch.5. To that end, TCEQ implements the U.S. Environmental Protection Agency's ("EPA") National Ambient Air Quality Standards ("NAAQS") within the boundaries of the State. Among other things, TCEQ enacts rules pertaining to air quality standards, develops State Implementation Plan ("SIP") revisions to meet the federal standards, works to obtain EPA approval of SIP elements, administers incentive and voluntary programs to reduce emissions, issues pre-construction new source review and post-construction federal operating permits to stationary sources, and ensures compliance with state and federal air quality rules.

4. TCEQ has the authority to promulgate and implement administrative regulation related to air quality. *See* Tex. Water Code § 5.103; Tex. Health & Safety Code § 382.017. TCEQ accordingly develops rules

required by the CAA or as deemed necessary for protecting human health and the environment in the State. *See, e.g.*, 30 Tex. Admin. Code chs. 101–122.

5. The TCEQ OA is responsible for preparing and developing plans for the prevention, abatement, and control of air pollution in Texas; complying with the requirements of federal air pollution laws; and enforcing Texas air pollution laws. I am responsible for managing TCEQ OA staff and programs, which includes the Air Quality Division, the Air Permits Division, the Air Grants Division, and the Air Monitoring Division. These divisions within OA are responsible for: developing and implementing state air quality plans for the protection and restoration of air quality including ongoing progress for meeting environmental standards; all TCEQ air permitting activities; administering voluntary and incentive programs to reduce air emissions; and installing and maintaining a network of ambient air stationary monitors as well as short term mobile monitors from which data is received and analyzed to assess, forecast, and evaluate air pollution and public health as well as to inform air quality planning and compliance with the NAAQS.

6. I am providing this declaration in support of the State of Texas' and Texas Commission on Environmental Quality's petition for review of "New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & Group II Polymers and Resins Industry," published at 89 Fed. Reg. 42,932 on May 16, 2024. My opinions in this declaration have been informed by briefings from the TCEQ professional engineering, legal, and technical staff concerning the proposed rule and final rule.

II. EPA's Rulemaking

7. EPA published its proposed rule entitled "New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry," on April 25, 2023. 88 Fed. Reg. 25080 (April 25, 2023). The proposed rule included amendments to both the New Source Performance Standards (NSPS) and the National Emission Standards for Hazardous Air Pollutants (NESHAP) that applied to

the Synthetic Organic Chemical Manufacturing Industry (SOCMI), as well as revisions to the NESHAP for the Group I & II Polymers and Resins Industry. The SOCMI NESHAP requirements are commonly known as the Hazardous Organic NESHAP or HON. *See*, 88 Fed. Reg. 25080, 25083 (April 25, 2023). TCEQ submitted comments on the proposed rule, available in the EPA docket for the rule, EPA-HQ-OAR-2022-0730-0147, at www.regulations.gov.

8. The EPA published its final rule "New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry" on May 16, 2024 (89 Fed. Reg. 42932). The final rule applies to a variety of types of equipment and processes that chemical plants use to make synthetic organic chemicals and polymers and resins.

III. The CAA's Cooperative Federalism

9. The CAA has been recognized as "an experiment in cooperative federalism" through which Congress "establishe[d] a comprehensive program for controlling and improving the nation's air quality through

state and federal regulation." *Texas v. EPA*, 829 F.3d 405, 411 (5th Cir. 2016). The CAA contains multiple regulatory programs for controlling air quality that prescribe both federal and state roles and responsibilities.

IV. Requirements for New and Modified Sources

10. Title I of the CAA provides authority for multiple programs to address air quality, including the NSPS program, 42 U.S.C. §7411, as well as the NESHAP program, 42 U.S.C. §7412.

11. Under the NSPS program, EPA sets technology-based standards for new, reconstructed, and modified stationary sources for specified source categories

12. Under the NESHAP program, the CAA provides a list all Hazardous Air Pollutants (HAPs) that pose a significant health and environmental risk and then for each listed pollutant, EPA must then develop a list of stationary source categories that emit those listed pollutants in significant quantities. EPA is then required to develop "maximum achievable control technology" (MACT) standards for both new and existing major sources in the respective source categories that are based on the degree of emission control that is achievable through the application

of technology used by the best performing sources within the source category (new sources are held to stricter emission standards). The NESHAP MACT program also provides for residual risk reviews in specified circumstances and other specific provisions for area sources.

13. The CAA provides authority for EPA to delegate its authority to implement and enforce portions of the NSPS and NESHAP, 42 U.S.C. §7411(c) and 42 U.S.C. §7412(l). EPA originally delegated NSPS and NESHAP authority to Texas November 15, 1978, as published February 7, 1979, 44 Fed. Reg. 1979, updating this delegation periodically. EPA further delegated specific authority for NESHAPs to Texas as part of its final interim approval of Texas' Federal Operating Permits program required by Title V of the CAA, 42 U.S.C. §7661-7661f; published June 26, 1996, 61 Fed. Reg. 32693.

VI. Initial Implementation Costs

14. I estimate that the activities necessary to implement the HON to include the following:

a. review of the HON to understand the regulatory changes, train permit reviewers, and make changes to agency computer systems used for the development of NSR and Title V permits;

b. review of, and changes to, any permits by rule or standard permits that are utilized by the SOCMI or Group I & II Polymers and Resins Industry that would need to incorporate the revised NSPS and NESHAP; and

c. processing of permit revisions for both for NSR and Title V to incorporate the new NSPS and NESHAP as appropriate.

15. I estimate that these activities will involve at least 12,672 staff hours.

16. Additionally, the work activities described above will divert TCEQ resources from other critical work.

17. OA staff have already begun the process of implementing the HON to maintain compliance/align with HON requirements.

18. Rulemaking to incorporate the HON may also be needed, and if so, will require significant resources. I estimate that costs associated with development of required rulemaking will include 3,845 hours of labor.

VII. Other Immediate Permitting Costs

19. The effective date of the HON also imposes immediate permitting burdens on TCEQ. The permitting process is lengthy and resource intensive, involving both pre-construction (new source review) and post-construction (federal operating permits), which are separate permitting programs in Texas. It involves staff review and development of draft permits, public notice, potential public meetings, potential contested case hearings for new source review permits (which are administrative evidentiary processes held before an administrative law judge), and likely extensive public input. Federal operating permits undergo similar procedural requirements, including public notice, opportunity for a notice and comment hearing and public comment, an EPA review period, and the opportunity for citizens to petition EPA to object to the permit. TCEQ reviews and responds to the submitted comments on the proposed permit changes, in some circumstances adjusting the permits, and participates in contested case hearings.

20. The revised HON is anticipated to impact approximately 146 permits in Texas. All of the affected sources must identify how the HON will affect units at their sites and whether changes will be needed to com-

ply with the HON. If physical or operational changes are needed to comply with HON, those changes must receive pre-construction authorization through the Texas' NSR program. Even if no physical or operational changes are necessary at a particular site, if the site is required to have a Title V permit, their Title V permit must be revised to include the applicable HON requirements. The required permitting changes will result in additional work for commission staff as well as potential delays for planned construction, impacting financial obligations for the regulated entities as well as potential negative effects to the economy.

21. These permitting requirements create additional burdens on TCEQ staff and will coincide with TCEQ's other critical work involving the same key personnel. The Air Permits Division within the OA reviews applications for new source review and federal operating permits. An onslaught of applications will divert attention from new and expanding facilities in Texas, negatively impacting economic growth and public protection. Both the Air Permits Division and the Air Quality Division are responsible for reviewing and commenting on proposed federal regulations, providing valuable comments to EPA on how regulations will impact Texas' air quality and economic activity. Diverting resources away

from these important projects undermines Texas' ability to protect public health.

22. These harms are immediate, as the effective date of the HON has not been stayed and in order for stationary sources to comply with the HON they must have both NSR and Title V permits that incorporate the HON requirements.

* * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on January 8, 2025

Richard Chism
Director
Office of Air

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF TEXAS, *Petitioners,* v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND MICHAEL S. REGAN, Administrator, United States Environmental Protection Agency *Respondents*.	§ § § § § § § § § § § § § § §	Case No. 24-1246 (Consolidated with 24-1135, 24-1228, and 24-1246)

DECLARATION OF KRISTI MILLS-JURACH IN SUPPORT OF PETITIONER STATE OF TEXAS' PETITION FOR REVIEW

I, Kristi Mills-Jurach, hereby declare as follows:

1. My name is Kristi Mills-Jurach, and I am the Assistant Director of the Office of Compliance and Enforcement ("OCE") at the Texas Commission on Environmental Quality ("TCEQ," "agency," or "commission"), a position I have held since June 2021. I have a Bachelor of Science degree in Civil Engineering from the University of Memphis and am a licensed Professional Engineer in Texas. Prior to joining the TCEQ in 2009, I worked as an environmental engineer with Shell Oil Company,

BP Amoco Chemical, Koch Refining, Environmental Resources Management (ERM Southwest) and Samsung Austin Semiconductor. Since joining the TCEQ, I have held various roles including Engineer, Team Leader, Section Manager, and Division Director in the Office of Air ("OA") and OCE prior to being promoted to Assistant Director of OCE. I am over the age of eighteen and competent to testify about the matters in this declaration based on my personal knowledge, my experience with the agency, and information provided to me by TCEQ personnel.

I. Texas Commission on Environmental Quality

2. TCEQ is composed of three commissioners, appointed by the Governor, with the advice and consent of the Texas Senate, for staggered six-year terms. TCEQ is the State agency charged with implementing and enforcing the State's various environmental regulatory programs. *See* Tex. Water Code ch. 5. It is one of the largest environmental agencies in the world. TCEQ's mission is to protect the state's public health and natural resources consistent with sustainable economic development by: (1) basing decisions on the law, common sense, sound science, and fiscal responsibility; (2) ensuring that regulations are necessary, effective, and current; (3) applying regulations clearly and consistently; (4) ensuring

consistent, just, and timely enforcement when environmental laws are violated; (5) ensuring meaningful public participation in the decision-making process; (6) promoting and fostering voluntary compliance with environmental laws and providing flexibility in achieving environmental goals; and (7) hiring, developing, and retaining a high-quality, diverse workforce. TCEQ's goal is clean air, clean water, and the safe management of waste.

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5. The TCEQ OCE is responsible for ensuring compliance with the requirements of federal air pollution laws and enforcing Texas air pollution laws. I am responsible for assisting with the management of all OCE programs, which include the Critical Infrastructure Division, the Enforcement Division, the Program Support & Environmental Assistance Division, as well as sixteen regional offices that are overseen by four regional area offices: the Border and Permian Basin Area, the Central Texas Area, the Coastal and East Texas Area, and the North Central and West Texas Area. These divisions and Area Offices within OCE are responsible for monitoring compliance across nearly every program

within the jurisdiction of TCEQ. Generally, Tex. Water Code ch. 7 grants TCEQ authority to enforce statutes, rules, orders, permits, or other decisions of TCEQ. The major activities performed by TCEQ regional offices include conducting investigations, investigating environmental complaints, addressing violations, and responding to environmental emergencies.

6. I am providing this declaration in support of the State of Texas' and Texas Commission on Environmental Quality's petition for review of "New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry," published at 89 Fed. Reg. 42,932 on May 16, 2024. My opinions in this declaration have been informed by briefings from the TCEQ professional engineering, legal, and technical staff.

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11. Under the NSPS program, EPA sets technology-based standards for new, reconstructed, and modified stationary sources for specified source categories.

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achievable control technology" (MACT) standards for both new and existing major sources in the respective source categories that are based on the degree of emission control that is achievable through the application of technology used by the best performing sources within the source category (new sources are held to stricter emission standards). The NESHAP MACT program also provides for residual risk reviews in specified circumstances and other specific provisions for area sources.

13. The CAA provides authority for EPA to delegate its authority to implement and enforce portions of the NSPS and NESHAP, 42 U.S.C. §7411(c) and 42 U.S.C. §7412(l). EPA originally delegated NSPS and NESHAP authority to Texas November 15, 1978, as published February 7, 1979, 44 Fed. Reg. 1979, updating this delegation periodically. EPA further delegated specific authority for NESHAPs to Texas as part of its final interim approval of Texas' Federal Operating Permits program required by Title V of the CAA, 42 U.S.C. §7661-7661f; published June 26, 1996, 61 Fed. Reg. 32693.

VII. Initial Implementation Costs

14. I estimate that the activities necessary to implement the HON to include the following:

a. review of the HON to understand the regulatory changes;

b. revising investigation checklists and procedures to incorporate the new requirements;

c. development of enforcement initiation criteria related to the new requirements;

d. training investigators, enforcement, and program support and environmental assistance staff; and

e. outreach activities.

15. I estimate that these activities will involve at least 1,000 staff hours initially and an additional 500 staff hours per year.

16. Additionally, the work activities described above will divert TCEQ resources from other critical work.

17. OCE staff have already begun the process of implementing the HON by including the effective requirements in regularly scheduled compliance investigations in accordance with EPA's compliance monitoring strategy.

VIII. Other Immediate Costs

18. The effective date of the HON also imposes immediate permitting burdens on TCEQ, which also impacts OCE staff. The revised HON is anticipated to impact 146 permits in Texas. Investigations of deviation reports and comprehensive onsite investigations include a review of applicable requirements incorporated into air permits.

19. Additionally, OCE staff must incorporate new requirements into compliance monitoring, investigations, and enforcement processes.

20. These requirements create additional burdens on TCEQ staff and will coincide with TCEQ's other critical work involving the same key personnel. OCE staff regularly consults with OA permitting staff during permit application reviews for new source review and federal operating permits in regard to practical enforceability. OCE also conducts investigations to determine compliance with applicable authorizations, requirements, and statutes. Additional applicable requirements will need to be incorporated into these enforceability reviews, subsequent investigations, and programmatic updates. This has the effect of negatively impacting economic growth and public protection by diverting attention from new and expanding facilities in Texas. As noted above, OCE staff

are responsible for a wide variety of tasks to protect public health and ensure compliance with state and federal environmental laws and regulations. Diverting resources away from these important projects undermines Texas' ability to protect public health.

21. These harms are immediate, as the effective date of the HON has not been stayed. In order for stationary sources to comply with the HON, they must have both NSR and Title V permits that incorporate the HON requirements and OCE staff must begin the compliance and enforcement activities discussed in this declaration.

* * *

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on January 9, 2025

Kristi Mills-Jurach

Kristi Mills-Jurach, P.E.
Assistant Director
Office of Compliance and Enforcement

CERTIFICATE OF SERVICE

I certify that on January 17, 2025, the foregoing was electronically filed through this Court's CM/ECF system, which will send a notice of filing to all registered users.

/s/ Catherine E. Stetson
Catherine E. Stetson